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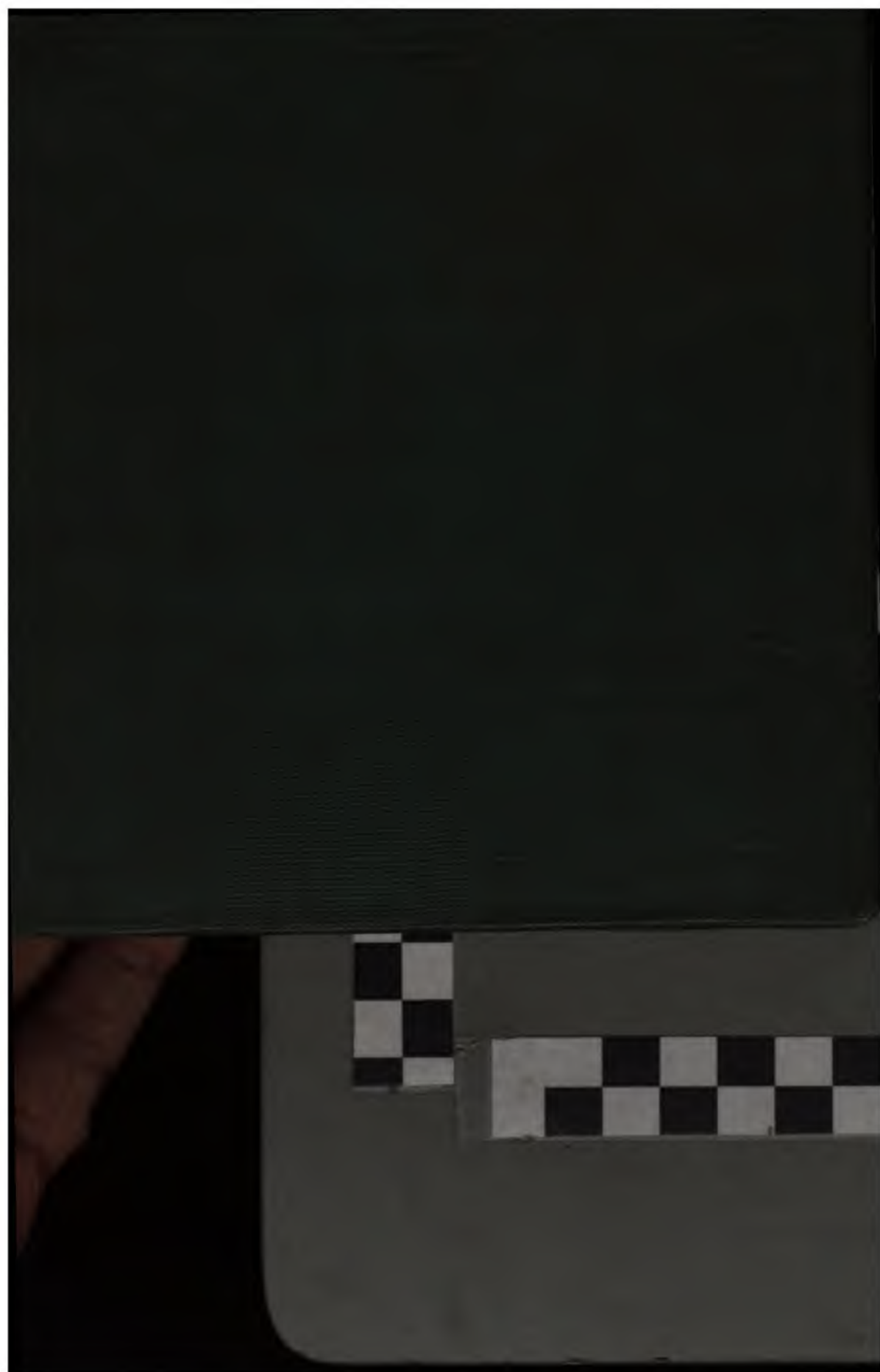
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(FRONTISPIECE.)—Images of terra cotta from stone graves, (one-third size.)
(Author's collection.)

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THE
ANTIQUITIES OF TENNESSEE

AND THE ADJACENT STATES

AND THE

STATE OF ABORIGINAL SOCIETY IN THE SCALE OF
CIVILIZATION REPRESENTED BY THEM

A SERIES OF HISTORICAL AND ETHNOLOGICAL STUDIES

BY

GATES P. THRUSTON

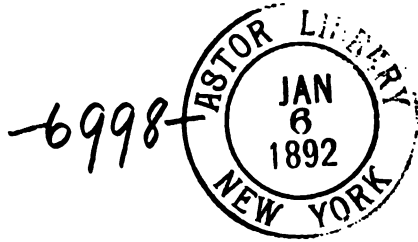
CORRESPONDING SECRETARY OF THE TENNESSEE HISTORICAL SOCIETY

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CINCINNATI

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1890



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TO THE
OFFICERS AND MEMBERS
OF THE
TENNESSEE HISTORICAL SOCIETY,
AND ESPECIALLY TO
JOHN M. LEA, ITS HONORED PRESIDENT,

This Volume is Affectionately Inscribed.

THEIR ENCOURAGING WORDS FIRST SUGGESTED ITS PUBLICA-
TION, AND HAVE CONSTANTLY RELIEVED THE
LABORS OF ITS PREPARATION.

P R E F A C E.

The main purpose of this volume is to present the results of recent archæological investigations in Tennessee. When the large aboriginal cemetery near Nashville was discovered and explored about two years ago, at the instance of the Tennessee Historical Society, I undertook the duty of preparing a pamphlet illustrating some of the fine types of pottery and other objects from the stone graves; but the material worthy of illustration accumulated so rapidly that it was found impracticable to do justice to it in the modest way contemplated, and the "pamphlet" has grown gradually into its present proportions. It became necessary to consider the *general subject* of ancient monuments and antiquities in Tennessee, in order to properly introduce the *new material* discovered, and thus render the publication useful to a larger class of readers. It seemed also desirable to include a more complete summary, for the benefit of the large number of students in Tennessee specially interested in its antiquities.

As the aboriginal remains of some portions of the neighboring states are very similar in character, I have illustrated specimens from these states, when convenient and of interest, and have felt at liberty to include them in the title to this publication.

The subject has been presented in a *series of historical and ethnological studies*.

Unfortunately, engrossing business engagements and duties have seriously interrupted the leisure necessary to the satisfactory preparation of the work. Most of the chapters have been written in the office of the "President and Attorney" of the State Insurance Company of Tennessee, where contracts and mortgages, and old flints and vessels from the graves, have been piled upon the

same office desk, during the past year or more; but my antiquarian friends may be assured that the "old relics and pots" have received an ample share of consideration, and have been regarded as fully as interesting and important as the more commercial treasures. These double duties, I trust, may be accepted as my apology for a few repetitions and an occasional lack of care and consistency in the preparation of some portions of the volume.

In a lecture before the Tennessee Historical Society, in 1888, upon "Ancient Society in Tennessee," subsequently published in the *Magazine of American History*, this subject was considered at some length. The general propositions therein set forth have not been materially changed; but after the examination of a great many new specimens brought to light since that time, I find some expressions contained in the former publication should be modified. I have also endeavored to present the special views then advanced more clearly and definitely.

The preparation of the engravings (which will, of course, be regarded as the most useful part of the work) has been an arduous task. I regret that many of them are inartistically, and even crudely, executed, but it has been impracticable to send the delicate and valuable specimens to the centers of the engraving arts to be sketched and illustrated. I have, therefore, been compelled to content myself with such facilities in this department as were afforded at home. I have endeavored, however, to illustrate the objects with exactness of details and truthful expression. I have also had many of the specimens photographed in groups and photo-engraved by the Moss Engraving Company, of New York, directly from these impressions, thus reproducing the original objects with photographic fidelity. These plates are admirably executed.

The genuineness of the new specimens illustrated may be relied upon. As a rule, collectors of experience and observation are less likely to be imposed upon by "archæological frauds" than more learned "scientists" and theorists, who are, occasionally, too ready to reject evidence as to new discoveries.

We are under obligations to many friends and others for assist-

ance in this work. To the valuable researches of Dr. Joseph Jones, the pioneer of archæological investigation in Tennessee, we are greatly indebted, as we are also to Prof. F. W. Putnam, of the Peabody Museum, and to Colonel C. C. Jones, Jr., of Georgia, author of the *Antiquities of the Southern Indians*. We are under special obligations to Mr. W. H. Holmes, of the National Bureau of Ethnology, and to Dr. Cyrus Thomas, Major J. W. Powell, and also to Prof. Langley, of the Smithsonian Institution.

These useful public institutions are more than fulfilling the expectations of the government and the public, in the advancement and dissemination of useful scientific knowledge.

My sincere thanks are due to my friends, Colonel W. B. Reese, D. R. Johnson, Dr. J. M. Safford, Jos. S. Carels, Prof. C. F. Smith, Dr. H. M. Pierce, Robt. T. Quarles, Dr. W. C. Blackman, and Park Marshall, of Franklin, for assistance kindly rendered. Indeed, I would be unable to name all the friends and acquaintances who have generously aided me in various ways, and but for whose assistance my labors would have been much increased. I also take pleasure in thanking Messrs. R. B. Gill and J. H. Wright, of the Nashville Engraving Company, and Messrs. C. H. Hankins and T. J. Turley, for their valuable assistance rendered in the preparation of the drawings and engravings.

G. P. T.

NASHVILLE, TENN., *June*, 1890.

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ANTIQUITIES OF TENNESSEE.

CHAPTER I.

INTRODUCTORY.

Recent Discoveries in Tennessee—Accounts of the Early Historians—The Native Tribes Apparently Homogeneous—Theories of Bancroft and Morgan—Different Types of Indians—A Summary of the Results of Investigation—Traces of the Village or Pueblo Type—The Shawnees—The Natchez—The Arts and Industries of the Mound Builders.

The prehistoric cemeteries of the Stone Grave race of Tennessee are among the most interesting memorials of aboriginal life in America. The mortuary remains were placed in cists or box-shaped graves built of stone slabs, and sometimes constructed with much care.

A hundred or more of these rude sarcophagi are occasionally found, deposited in several tiers or layers, in a single burial mound. In accordance with the ancient and modern mortuary customs of the native races, vessels containing provisions, and various utensils, were placed in the graves beside the dead, to supply them on their journey to the spirit land. Within these enduring cists of stone, are also found many other archæological treasures, illustrating the arts and industries of the ancient inhabitants of Tennessee. They were thus sealed up and protected from the waste of time, nearly as effectually as the elaborate tombs of Pompeii and Cumæ preserved the fragile vases of Roman porcelain.

They tell the story of ancient domestic life in the Cumberland and Tennessee valleys with remarkable exactness, and unravel secrets that the most imposing monuments of the native races have

failed to disclose. One of the largest and richest of these aboriginal cemeteries, about five miles south of Nashville, lying along the waters of Brown's creek, and in the midst of the historic battle field, has recently been explored, in fact, devastated by relic hunters and collectors. It is situated upon the farm of Mr. O. F. Noel, adjoining Glendale Park, between the Franklin and the Middle Franklin turnpikes, and in one of the most fertile, well-watered, and beautiful sections of Tennessee.

Upon this favored site, centuries ago, there was a large town or city, probably the ancient metropolis of the Stone Grave race of Middle Tennessee. Not less than three thousand closely laid stone graves were found in the adjacent cemetery, and at least a thousand more were discovered upon the adjoining farms. Many towns, villages, and settlements were located in the surrounding country, and the smaller cemeteries upon nearly every large farm in this general section, establish the fact that a widely distributed population once occupied this fertile territory, and buried its dead, for several generations at least, in various local or family burial grounds.

Notwithstanding its rough usage, the large central cemetery has proved a valuable treasury of antiquities. Some six or seven hundred perfect specimens of well-burned pottery have been obtained within its limits; many of them unique in form, and so finely finished that they may be said to be semi-glazed. Nearly every familiar natural object, animate and inanimate, is represented in the forms of this ware. Animals, birds, and fish in great variety, the human figure in many attitudes, sea-shell forms, and grotesque and fanciful figures are all represented, and many of the vessels have been colored and decorated with considerable artistic skill. There are cooking vessels, drinking cups, water jars, hanging vessels, sets of ware, ornamented and plain, basins, bottles, vases, spoons, and, indeed, every variety of equipment for a well-stocked aboriginal cuisine. Many of the images and terra-cotta heads doubtless show approximately types of the very faces and



lineaments of the race buried beside them; evidently the ancient Indian aristocracy of the Cumberland valley.

No specimens of the kind of superior workmanship, or more distinctly outlining features, expression, and dress have been found, so far as we are informed, within the territorial limits of the United States. In a child's grave of the ancient cemetery was found a remarkable terra-cotta figure nine inches long, representing a little child or papoose tied to its hanging board, after the historic Indian style, showing that this custom also prevailed among the prehistoric tribes. Sets of toy plates, dainty little vases and bowls, and terra-cotta rattles, and marbles for the children were found within their graves; doubtless, placed there by the hands of the ever-loving mothers. It seems also that some of the inhabitants of this ancient city must have followed special trades or occupations, as sets of tools and implements of pottery, stone, and bone were discovered.

Five clay implements of different sizes, probably plastering trowels, two of them quite large, were found in a single grave—evidently the outfit of some plasterer, who worked upon the ancient adobe or clay-plastered houses that once dotted the picturesque valley of Brown's creek. The implements of the pottery makers were also abundant.

A set of eight finely ground chisels of chipped flint were found in one grave, probably the equipment of some old artisan, perhaps a lapidary or wood-worker. A set of five peculiar and carefully made bone implements like little spatulæ, or paddles, with long handles, looked like they might have been used to mix nostrums in some aboriginal medicine shop. An engraved disc of stone of some significance was also discovered in this old cemetery, and in some of the neighboring stone graves were small symmetrical wheels of stone and terra-cotta that looked like little pulleys, most skillfully plated with a thin coating of native copper. Beautiful quartz discs, rare and unique implements, and ceremonials of chipped and polished stone, were among the objects found. The presence of many articles from other sections of the country also indicates that in the prehistoric period there must have been commercial inter-

course or contact with tribes living at a great distance from this ancient town or city. Many of the drinking cups, ornaments, and utensils were made of marine shells from the gulf or the South Atlantic coast. The native copper found came from the borders of Lake Superior. The mica from Virginia and North Carolina. The material for the beautiful implements of steatite, hematite, porphyry, jasper, and cannel coal must have come from other, and in some instances, very distant sections. A pipe of brilliant red catlinite, found only *in situ* in Western Minnesota, was one of the objects discovered.

The vessels, ornaments, and implements, discovered in the graves of the smaller cemeteries of the surrounding country, show that the villagers and farmers, or gardeners, who were buried there, had probably lived nearly as comfortably as the townspeople on Brown's creek, and had been supplied with many domestic conveniences and even with luxuries. Notwithstanding the large population that occupied the central city and the adjacent country, no ancient defensive or military works or earth-works of magnitude have been discovered in the immediate vicinity of Nashville. There is a large artificial mound a half a mile north-east of Noel cemetery, about twelve feet high, but it does not appear to have been a place of burial or to have been connected with any system of earth-works. It was doubtless used for some public or religious purpose. It may have been a mound of observation or the residence site of some old chieftain.

A cordon of frontier forts, or fortified towns, however, protected this central and thickly settled district, and probably enabled its population to live in peace and security for generations. This may in some measure account for the comparatively advanced state of native society in this section in the prehistoric time. There were two of these large forts on the north, in the adjacent county of Sumner, one about thirty miles to the eastward, in Wilson county, and three or four in Williamson, the adjoining county on the south, distributed along the waters of the Harpeth river, thus inclosing the more advanced settlements of the Stone Grave race,

near Nashville, with a line of outlying forts, nearly equidistant from this common center. On the north-west, and down the Cumberland river, were their kindred of the same race, and defensive works are not found, and were probably not necessary. Plans and descriptions of several of these fortified towns will be found in the succeeding chapter.

The remains of forts, villages, and settlements of the Stone Grave race have been discovered in several other portions of the state outside of this central district. There were also extensive settlements in the valleys of East Tennessee, in Northern Georgia, in the lower valley of the Cumberland, in Southern Kentucky, Southern Illinois, and perhaps other sections; but the most populous centers of this interesting race seem to have been in the vicinity of Nashville. It is within the bounds of truth to state that, after a century of occupation by the whites, the burial grounds of its aboriginal inhabitants, within a radius of thirty miles from this center, contained a greater number of graves than the aggregate of the present cemeteries of the whites within the same limits.

To the archæologist they offer an inviting field for investigation. We know of no other portion of the Mississippi valley where the monuments and remains of the arts and industries of the native races can be studied with the hope of a better reward.

Although essentially primitive and Indian in their characteristics, the remains of "the mound builders," or fort builders, of the Cumberland valley indicate that this progressive race belonged to a more advanced type of North American Indians than the nomadic tribes of the early frontier. In the scale of civilization it should probably be classed with the best types of sedentary or village Indians of New Mexico or Arizona. The temperate climate of this section, its healthful, fertile, and well-watered valleys, favored development. The struggle for the necessities of life was not so severe as in the North. If modern Tennesseans are permitted to pride themselves upon the comparatively advanced state of their aboriginal predecessors, we may assure them, that the

latter moved in the highest circles of respectability and barbaric comfort known to the ancient valley of the Mississippi. No native Americans north of Mexico, in the prehistoric period, came nearer to the confines of semi-civilization.

Here, doubtless, the magnates of the Stone Grave tribes, upon public occasions, carried with dignity some of the remarkable scepters and maces of authority, and displayed the beautiful ceremonial implements, engraved gorgets of shell, and family insignia, illustrated in succeeding chapters of this work. Here an industrious and progressive race was slowly working its way along humble paths of progress toward a higher state.

In an evil hour, unhappily, the spoilers came, perhaps the ancestors of the rapacious and vindictive Iroquois of the North, the Goths and Vandals of the Western World, arresting development and rudely shocking and dispersing these less warlike communities. The period of this catastrophe or succession of disasters was probably not very remote.

If we could have been given a glimpse of the fair valley of the Cumberland in 1492, the date of the Columbian discovery, it is quite probable that we should have found some of these ancient settlements full of busy life. We might have learned the story of the mounds and graves from some of their own builders: but nearly three centuries elapsed before the pioneers of civilization reached the confines of Tennessee. It is true that, about fifty years after the discovery, De Soto and his army (A. D. 1540) brushed along its southern border, rudely startling the native inhabitants, but they passed on across the great river and probably never came within the actual bounds of Tennessee. A hundred and thirty-two years then elapsed. In this long interval no European stepped within our limits, so far as we know. In 1673, Marquette came in his shallow bark, floating down upon the broad waters of the Mississippi, its first white explorer.

A few years later came that intrepid French discoverer, La Salle, but he only looked upon the swamps and forests of the river

margin. Nearly a century intervened before the hardy pioneers of Virginia and Carolina scaled the mountains and claimed a home in the valley of the Watauga, or Daniel Boone started on the "wilderness trail" for the far West.

In all these years, Tennessee, infolded in her ancient forests and mountain barriers—in her insulation, remote from ocean, lake, and gulf—was as unknown to the outer world as Central Africa. France claimed her territory by right of discovery as part of Louisiana and Illinois. Spain called it Florida and set up her right. England assumed sovereignty over it as part of Virginia and Carolina, but none of them took possession. Even its Indian claimants had to fight for their titles. Vincennes in Indiana, Kaskaskia in Illinois, and New Orleans were founded. Texas and Missouri were colonized. Santa Fe, in New Mexico, a thousand miles and more to the west, had become an old Spanish town; yet Tennessee was still without name or description, save that it was marked on the New World maps as "the unexplored land of the ancient Shawnees."

These facts are stated to show how little history can tell us directly of ancient Tennessee or of the Stone Grave race, yet for nearly four hundred years, Spanish, French, and English travelers have published chronicles and manuscripts relating to the natives of the South Atlantic and Mexican Gulf coasts, neighbors and allies of the tribes of the interior country, now known as Tennessee, and presumably akin to them in race and manner of life. Ponce de Leon came to Florida in 1512. De Ayllon, another Spaniard, visited the coast of South Carolina in 1520, and again in 1524. An Italian discoverer, Verrazano, visited the coast of North Carolina in 1524. He reported that he found the natives primitive in their habits, uncivilized, and numbering a large population. Narvaez, who vainly attempted in 1528 to conquer the country then called Florida (embracing Tennessee), found there populous towns, well fortified, and surrounded by extensive fields of corn and maize. Volumes of narrative and manuscript have also been left us by the chroniclers of De Soto's expedition.

About 1540, Cartier and Roberval, French pioneers of discovery, visited Canada, then claimed by Spain as their Florida of the North. The French Huguenots came under Ribaut, and attempted to plant a colony on the Carolina coast, in 1562, nearly fifty years prior to the Virginia settlement at Jamestown. Ribaut's published journal describes in detail the character and habits of the natives on the coast and in the interior; describes their villages, their agricultural habits, and their cultivated fields. Champlain and others gave faithful accounts of the native Americans of the North. La Salle describes the natives of Arkansas and Texas as he found them in 1673. Other early French and Spanish writers describe with much particularity the habits, dress, and manners of the ancient tribes living on the Gulf coast.

From these journals and manuscripts, sometimes buried for centuries in the great libraries of Europe, we have reasonably faithful information as to the history, traditions, and mode of life of the ancient inhabitants of the territory adjacent to and surrounding Tennessee.

The testimony of all, added to that of the Virginia and New England colonists, establishes the fact that these native Americans, called by Columbus "Indians," were alike in their main characteristics, and belonged to a race apparently homogeneous.

The swarthy red or copper or olive complexion, the dark eyes, the coarse, straight black hair, the high cheek-bones, were common to all, from the St. Lawrence river to Texas. Their half-nakedness, their simple and primitive habits, the drudgery of the women, the generally aquiline nose, the absence or scantiness of beards, their love of smoking, of gay colors, painted faces, feathers, plumes, feasts, dances, were noted by these writers, and indicate the probable ethnic unity of the race—recalling the remark of Ulloa, the early Spanish governor of Louisiana, quoted by Robertson, that "If we have seen one American, we have seen all, their color and make up are so nearly alike."*

* "But among all other inhabitants of America, there is such a striking similitude in the form of their bodies, and the qualities of their minds, that, notwith-

The fact that these early records show no traces of an advanced civilization, or of a race essentially different or superior, affords at least the presumption of a common ancestry and of an inherited state of savagery or barbarism. A number of the early writers state, however, that the native tribes of the South and South-west lived in larger towns, were milder and more docile in disposition, and were more advanced in the primitive arts than the tribes of the North.

Passing from this brief historical review, to the interesting problems relating to the origin of the ancient mound and grave builders of Tennessee, their race relation, their tribal affinities, and their culture-status in the scale of civilization as represented by their monuments and art, we enter upon more uncertain ground.

It is a difficult task to construct exact history out of the ashes of buried villages, and the debris of ancient mounds and cemeteries. We can only approximate the truth, and no one can hope to acquire even a limited comprehension of this subject, without fully realizing the complications that environ it.

The gifted Palgrave assured us "that we must give up that speechless past, whether fact or chronology, doctrine or mythology, whether in Europe, Asia, Africa, or America; at Thebes, or Palenque, on Lycian shore or Salisbury plain; lost is lost; gone is gone forever." Yet we, as Americans, can not but feel an interest in unraveling the history of the ancient "First Americans," whose remarkable and suggestive remains are found in the fertile fields and along the river sides of Tennessee, and, indeed, almost every-where throughout the Mississippi valley. They afford a field for archæological research useful, fascinating, and near at hand.

standing the diversities occasioned by the influence of climate or unequal progress in improvement, we must pronounce them to be descendants from one source." Robertson's History of America, page 69.

Humboldt says the aborigines of Mexico, out of which its civilization was developed, resembled those of Canada, Florida, Peru, and Brazil, and that they evidently descended from the same stock or stocks.—New Spain, A. D. 1808, page 105

At the very threshold of the subject, however, the inquirer will meet with a number of difficulties.

The problems to be dealt with carry us back into a remote and unmeasurable antiquity. All standard authorities agree, that our western continent had been peopled at least two or three thousand years prior to the date of its discovery. This fact must be fully realized, and accepted without question, before progress can be made in the investigation. Geology, history, ruins upon ruins, tradition, moral and physical characteristics, the great variety of languages, the wide-spread dispersion—all unite in establishing the remoteness of the period. It must be measured by the epochs of geologic time, rather than by the years of chronology. A long night of oblivion has cast an impenetrable veil over the earlier centuries of aboriginal life in America. Only scattered and uncertain vestiges remain. The ancestry of our native races, whether of single, dual, or varied origin, can not be traced with certainty to other continents.* Prehistoric life in Tennessee, as elsewhere, is wrapped in mysteries.

The second great difficulty in the way, is the vast area over which the monuments and remains of ancient life in America are distributed. There is no portion of the double continent that does not appear to have had its human habitations at some period in the past. Evidences of occupation, stone implements—paleolithic and neolithic—fragments of pottery, mound remains, are found almost every-where, indicating innumerable conditions of life and environment, and various degrees of development. Major J. W. Powell, of the Ethnological Bureau, says the native races of North America had not less than seventy-five stocks of languages, and

* Many volumes have been written as to how America was originally peopled, without reaching any definite or satisfactory solution of the problem. After painstaking investigation, the author is disposed to agree with H. H. Bancroft, that America might have been peopled in so many ways that it is a hopeless task to seek to discover the "*one particular way*." Bancroft confesses that he has, therefore, no special theory to offer as to how it was first settled.—*Native Races*, Vol. V, page 6.

South America as many more. II. II. Bancroft has classified some six hundred of these languages and dialects, but the whole number has been estimated at thirteen hundred. It will be necessary, therefore, in considering the problems of ancient American history, that the mind shall firmly grasp the idea of *a long-continued and widely-spread occupation by ancient tribes in various stages of development*. A third difficulty, almost as embarrassing as the others, arises from the conflicting views and classification of our principal writers and ethnologists, who, by confusion of terms, and widely differing theories and nomenclature, have made it a serious task to acquire clear views of the subject.

For instance: The most valuable contributions to the ethnology and ancient history of the native races of America have been made by Lewis H. Morgan and Hubert H. Bancroft. There are no more eminent authorities upon this general subject. In the classification of Bancroft, the ancient Mayas, Quiches, and Aztecs are designated as "civilized nations," and the Pueblo tribes of Indians of New Mexico, as "semi-civilized."* Morgan, on the contrary, says: "There was neither a political society, nor a state, nor any civilization in America when it was discovered, and excluding the Eskimos, but one race of Indians, the Red Race."†

Bancroft, in his elaborate volumes, pictures the high state of civilization in Mexico, the royal palace and court of Montezuma, lordly manners, and an advanced state of society; while Morgan, with much learning and force of reasoning, insists that what Cortez and his Spanish chroniclers chose to dignify as the palace of Montezuma, was in fact a great and rude communal dwelling, only a grade above the pueblos of New Mexico, and that Montezuma was but "a cacique or principal war chief over tribes of r Indians in the middle status of barbarism," and that the r over-estimated Aztecs were a "breach clout" lot of adv Indians of the stone age.

It seems that civilization, barbarism, and savagery a

* Native Races, Vol. II, page 2; Vol. IV, page 685.

† Smithsonian Contributions (Morgan), Vol. IV, page 250.

comparative terms, as used by various authors, and that even the word Indian or "red Indian," unless analyzed and defined, has a very indefinite signification.

The American Indian family, considering the great number of tribes included in the term in its general acceptation, presented several types, some of them marked and distinct, others more difficult to classify. The Shoshones, the Chinooks of the Columbia river, the Digger Indians, and the wilder tribes of Canada and Mexico, in the scale of savagery, were below the standard of semi-agricultural tribes like the Iroquois, the Natchez, or the Shawnees. Some of the Shoshonean sedentary tribes of California were lower in the scale than many of the nomadic tribes. In military and tribal organization, and in the arts of war, diplomacy and eloquence, the Iroquois or the Creek was as much superior to the Indian of the village or pueblo class as the latter was superior to the former in some of the arts and industries of domestic life. We find tribes like the Navajos of New Mexico and the Pimas of Arizona—of the sedentary or village type, herding flocks, and subsisting mainly upon the products of the soil, yet living in rude dwellings, painting their faces, and scalping their enemies, like their more predatory neighbors of the Apache family. They have linguistic affinities, and are sometimes classed together.

Other village Indians on the Colorado river, of the pueblo type, the Maricopas, and Mohaves, do not live in pueblos, but in rude communal houses or huts, similar to those built by some of the eastern Indians—yet all are designated as Indians.*

The Iroquois and Hurons presented the finest types of the red Indian family of the North. Parkman calls the Hurons "a stationary tribe." †

When first visited by the whites, the Iroquois manufactured twine, nets, and cordage from fibers of bark, and wove belts, with warp and woof from the same material. They manufactured

* Smithsonian Contributions (Morgan), Vol. IV, page 130.

† The Jesuits in North America.—Parkman, XXXVI.

earthen vessels and pipes from clay mixed with silicious material, and hardened by fire—some of which were ornamented by rude medallions and elaborate markings.

They cultivated maize, beans, squashes, tobacco, and other products in fields and garden beds, and made unleavened bread, from pounded maize, which they boiled in earthen vessels. They tanned skins into leather, with which they manufactured kilts, leggins, and moccasins.* Parkman says the Hurons also cultivated and spun hemp, from which they made their twine and cordage.†

In the organization of their famous confederacy, in their military operations, and in the erection of defensive work, the Iroquois showed intelligence and ability of the highest order.‡

These tribes must, therefore, be classed, in the ethnical scale, a full degree above the ordinary status of savagery. The Natchez, Creek, Chickasaw, Choctaw, and other tribes of the southern family, belonged to the same general class of high-type red Indians. They were still further advanced in some of the domestic arts. They made a better quality and greater variety of earthenware and cloth fabrics. They lived in larger towns, and, as a class, under the influence of a milder and more favorable climate, they were more devoted to agriculture. There is a popular impression that

* Smithsonian Contributions (Morgan), Vol. VI, page 6.

† Jesuits.—Parkman, XXX.

‡ Governor DeWitt Clinton, of New York, in an elaborate lecture, in 1811, upon the history of this Indian nation, stated:

“The proceedings of their grand council, assembled annually at Onondaga, were conducted with great deliberation, and were distinguished for order, decorum, and solemnity. In eloquence, in dignity, and in all the characteristics of personal policy, they surpassed an assemblage of feudal barons, and were not, perhaps, far inferior to the great Amphictyonic council of Greece.”

President Dwight, of Yale College, also said of them:

“Their conquests, if we consider their numbers and their circumstances, were little inferior to Rome itself. In their harmony, in the unity of their operations, the energy of their character, the vastness, success, and vigor of their enterprises, and the strength and sublimity of their eloquence, they might be fairly compared with the Greeks.”

the historic Indians paid little attention to the cultivation of the soil, as a means of living; and therefore, that as a race, they had not the ability to support a population sufficiently dense for the erection of the imposing earth-works of the Mississippi valley. This is an error. All the best representative tribes, north and south, the Iroquois, the Ohio, and Illinois tribes, and the whole family of southern tribes, cultivated large fields of maize and other products, especially during periods of repose and freedom from wars. The Choctaws, in their ancient home east of the Mississippi river, were called "a nation of farmers." Adair mentions a maize field of the Catawbas of South Carolina, "seven leagues long," a field that would do credit to the prairie farms of the West. The granaries and caches of the natives, we are told by De Soto's historians, furnished his soldiers and horses with their main supplies, and often in abundance.*

In his expedition against the Cherokees, in 1779, General Shelby is said to have destroyed more than twenty thousand bushels of corn. Maize, or corn, was indigenous. It was one of America's gifts to civilization; and, from all accounts, hominy succotash, and mush were included in the general aboriginal menu. What better proof do we need of the ability of the Southern Indians to support themselves by agriculture than the progress made by the tribes removed to the Indian Territory! The Creeks, the Cherokees, the Choctaws, the Chickasaws, have not only demonstrated their ability to become a nation of farmers, but are already far advanced on the march toward civilization. These instances of Indian success in agriculture might be multiplied indefinitely.† They clearly establish the fact that the advanced tribes of historic Indians, under favorable conditions, had the ability to support a very large population.

Another element in the character of the historic Indian, not

* Historical Collections of Louisiana, Part 5, page 203.

† See Mounds of Mississippi Valley (Lucien Carr), page 7. Lallemont mentions twenty-nine tribes living south of the lakes, as "sedentary" and cultivators of the soil. Jesuit Relations for 1640, page 35.

generally credited to him, is a certain instinctive knowledge or appreciation of art, natural not only to the sedentary tribes, but even to the more nomadic tribes. No one who has seen the handiwork of the village Indians of the Far West territories, of the Cherokees or Shawnees, or even of their degenerate kindred of the modern frontier, has failed to observe that as a race they have a natural taste and dexterity in making certain classes of useful and ornamental articles. This was also a characteristic of the ancient Mexican races, and of the Pueblo tribes.

It seems a mysterious Providence that, notwithstanding their natural abilities, the North American Indians made slow progress toward a better condition. Their history illustrates the infinite pathos of human life. They were a numerous race, occupying a vast and productive territory through long ages, and in many centers of partial development; yet whether we consider them in their most advanced state, as an Aztec confederacy, crumbling "like a race of pigmies" before a few Spaniards, or as humble villagers on the banks of the Cumberland, a prey to Iroquois invasion, they never seemed to reach a stage of growth necessary to permanency and practical civilization.

The spirit of individual, family, and tribal independence, a characteristic of the red Indian so fatal to organization and development, was doubtless at the root of their constant failures. There was a natural tendency to disintegration in the Indian system. Haughty, taciturn, impracticable, impatient of reproof, faithful friends, implacable enemies, they never seemed able to grasp the principle of order, submission, and union necessary to stability and enduring progress.

Many causes led the early settlers and writers to underrate the natural abilities and capacities of the Indian race. They wasted their numbers and strength in the vain effort to resist the mighty march of the Western pioneers, became more and more involved in the very frontier warfare. Revenge and despair, the violation of treaties, the destruction of their towns and the driving of them to abandon the pursuit of agriculture. C

whites upon the frontier also sowed the seeds of discord and degeneration.

Thus, to the eyes and imagination of our pioneer settlers, the modern Indian appeared chiefly in his savage character—the type of a wild race of hunters and warriors. He could give to the whites only uncertain traditions as to the strangely formed earth-works. He knew little or nothing of the uses of many of the stone implements and antique images. He shook his head mysteriously, and said they belonged to a strange and unknown race. The French trading explorers had come with their convenient wares of iron, brass, and copper; and the manufacture of pottery soon became one of the lost arts. Arrow points and implements of iron supplanted those of flint.

Thus, also, many writers were led to draw a broad distinction between the race of mound builders and the modern Indians, and to magnify the works and intelligence of the former in contrast with the uncivilized condition of the latter. Modern investigation has broken down many of these theories, and greatly lessened this contrast. The deeper this subject is probed the more closely they are found to be related, until we are forced to the conclusion that they can not be divided into two entirely distinct and separate races.

Passing from the characteristics of the historic Indians, to an investigation of the mounds, implements, pottery, images, pipes, tablets and pictographs of the ancient inhabitants of Tennessee and the Mississippi valley, as a test of their civilization, or stage of development—we enter a field rich in archæology. The investigation in the main tends to strengthen the historic presumptions as to their status in the ethnical scale.

The results reached may be briefly summarized as follows :

First. The mounds and other earth-works of Tennessee and Southern Kentucky are simply the remains of ancient fortified towns, villages, and settlements once inhabited by tribes of Indians, some of whom were more devoted to agriculture, more stationary

in their habits, and more advanced in culture than the nomadic tribes generally known to the whites.

Second. Nothing has been found among the prehistoric monuments and remains in Tennessee, or, indeed, elsewhere in the Mississippi valley, indicating an ancient civilization or semi-civilization. There are many indications, however, of a state of native society, primitive and rude, yet, in some respects, more progressive and advanced than that found existing among the historic red Indians at the date of European settlement.

Third. The remains of the arts and industries and the cranial remains evidently connect the ancient tribes that occupied the Cumberland and Tennessee valleys with the native tribes of the West or South-west, of the sedentary or village Indian type. They place them in the ethnic scale in the same class as to culture as the village Indians of New Mexico and Arizona, and as the village tribes of old Mexico. The cranial remains and the remains of the arts, homogeneous among the mound tribes, also appear to separate the advanced tribes of mound builders from the more barbarous tribes of northern and north-eastern Indians.

Fourth. The pottery from the ancient graves in Tennessee is of the same general character, and is frequently identical in forms with that found in South-east Missouri, Arkansas, Southern Illinois and Indiana, indicating that these districts were, at some period in the past, occupied by the same tribe or closely allied tribes. There are also evidences of the most intimate tribal and trade relations between the inhabitants of these sections.

Fifth. The remains of art and industry found in Tennessee, including pottery, manufactured cloth, implements of stone, pipes, shell-work, and other useful and ornamental articles, as a whole, indicate that the ancient inhabitants of Tennessee probably reached as high a state of development as any of the native races within the present territory of the United States.

Sixth. The accumulation of a dense population in favored localities, and the progress made toward civilization, were probably

the results of periods of repose and peace, that enabled certain tribes to collect in more permanent habitations, and to pursue for a time more peaceful modes of life than some of their neighbors and successors. These periods of peace and advancement were probably succeeded by years of wars, invasions, migrations, or changes which arrested the limited development in the arts of peace and civilization, and left the native tribes in the status in which they were found by the whites.

These conclusions have been briefly stated in serial order, that they may be kept in mind as the basis for the more particular statements of facts and illustrations to be presented in subsequent chapters.

The primitive manifestations of art and industry found among the remains in the Cumberland and Tennessee valleys, and in adjacent states, were evidently in the main of indigenous growth. They may have been the results of centuries of gradual development within these boundaries, or they may have had an origin, borrowed in part through migration or inter-tribal intercourse, from the sedentary or village Indians of New or Old Mexico or elsewhere. We are inclined to the latter view. The evidences of a widely extended aboriginal trade and inter-communication are constantly increasing, and will be presented in a subsequent chapter.

New Mexico and Arizona were centers of a very ancient population. No ruins in America offer evidences of greater age than the remains found there. Domestic life in some of the pueblos has shown no material change in the centuries that have intervened since the Spanish expedition under Coronado visited them in 1540, a date contemporaneous with De Soto.*

It can scarcely be possible that the ancient inhabitants of the Central Mississippi valley, especially those along the lower Arkansas river, could have been entirely ignorant of the pueblo builders living along and near its upper tributaries in New Mexico. From

* Contributions to Ethnology (Morgan), Vol. IV, page 150.

this highland pueblo district the Arkansas flows across the plains, down into the very heart of mound and pottery development in the Mississippi valley.*

That the primitive culture centering in the States of Arkansas, Missouri, and Tennessee can be thus easily traced to the ancient semi-civilization of the village tribes of the West and South-west, offers at least one most reasonable hypothesis as to its origin. Further evidences of this connection will be presented in analogies and illustrations relating to the arts and domestic life of these two sections.†

It is difficult to ascertain the exact relation of the Stone Grave race of Tennessee, and its near kindred of the neighboring states, to the historic red Indian. At the period of early European settlement upon the Atlantic coast, and for more than a century later, the French discoverers inform us that the Indian occupants of this interior section were involved in constant and exterminating warfare.‡ It was a period of tribal "reconstruction." Whether the fort builders and pottery makers of the valleys of the Cumberland and Tennessee were overwhelmed, dispersed, and became practically extinct, or whether they were absorbed by more powerful or savage

* Prof. Cyrus Thomas, of the Bureau of Ethnology, in charge of mound explorations, states that "as we approach the Arkansas river, thence to Louisiana, the native pottery improves in character and ornamentation," and we find that the entire Mississippi district lying nearest to New and Old Mexico, and necessarily having relations more or less intimate, most advanced in the special branch of art, which, from a remote period, has been one of the leading industries of both Mexico and the Pueblos.

† Lewis H. Morgan regarded the mound builders of the Mississippi valley as village Indians of the same status, as to culture, as the village Indians of New Mexico and Arizona.—Contributions to Ethnology, Vol. IV, page 198.

‡ Discovery of Mississippi (Shea), page 4. There was no tradition of peace when the Miamis were at peace with their ancient enemies, the Cherokees and Chickasaws. "We can not live without war. Should we make peace with the Tuscaroras, we must immediately look out for some other with whom we can continue our beloved occupation."—Reply of the Cherokees to an offer to bring about a truce between them and the Tuscaroras. Ramsey's Hist. of Tenn. (Ch 1853), page 83.

conquerors, and became members of the Shawnee, Natchez, or other tribes, by adoption, may never be known. Prof. Cyrus Thomas, of the Bureau of Ethnology, insists that recent investigations establish the fact that the stone grave builders of Tennessee were the ancestors of the Shawnees.*

It is possible that this once powerful nation of Indians, and its adherents, who are reported to have at one time occupied the greater portion of the vast central district between Lake Erie and

* "The proof is equally conclusive that to the Shawnees are to be attributed the box-shaped stone graves, and mounds and other works directly connected with them, in the region south of the Ohio; especially those of Kentucky, Tennessee, and Northern Georgia, and, possibly, also some of the mounds and stone graves in the vicinity of Cincinnati."—*Work in Mound Exploration, Bureau Ethnology* (Cyrus Thomas), page 13. "Their mode of sepulture," he states, "is so marked in its peculiarities, as to warrant us in believing it to be an ethnic type, limited in its use to a single stock or a few tribes."

Dr. Thomas endeavored to trace the remains of the wandering tribes of Shawnees into several other sections; into North Georgia, Southern Illinois, and portions of Kentucky, Virginia, and West Virginia, and even into Eastern Pennsylvania, and to identify them or their tribal kindred as the builders of the scattering stone graves in these sections.—*American Antiquarian* (Thomas), May, 1885.

His reasoning and summary of facts connecting the Stone Grave race with the Shawnees, present a plausible theory, but we think they do not satisfactorily prove his conclusions. The Shawnees belonged to the Algonkin family of Indians, a nomadic and hunting race; and the vestiges of art and industry left by them and their kindred Algonkins in New England, Pennsylvania, and Virginia, are, as a class, much inferior to the remains found within the well-known area occupied by the mound builders. According to Dr. Daniel Wilson, and other authorities, the crania of the Algonkin Indians are dolichocephalic, or long, while those of the Stone Grave race are brachycephalic, or short.—*Prehistoric Man*, Vol. II, page 184. The tribes most closely related to the stone grave builders of Tennessee, as will be shown later, also resided in Arkansas and Missouri. There is no evidence that they were of Shawnee stock. They did not construct stone graves, for the reason that convenient slabs of stone could not be found in those sections of country. Prof. Thomas also claims that "the proof is conclusive that the Cherokees were mound builders, and that to them are to be attributed most of the mounds in East Tennessee and Western North Carolina; also that the ancient works in Northern Mississippi were built chiefly by the Chickasaws."—*Work in Mound Exploration, Bureau of Ethnology* (Thomas), page 13.

the Savannah river of Georgia, experienced reverses that resulted in the partial abandonment of agriculture, and their consequent degeneration into a more savage state.

Consider the influence of a century of peace upon tribes of Indians like the Natchez, the Shawnees, or the Hurons. Peace and agriculture in a fertile territory might have enabled them to develop the highest culture represented by the ancient remains of art and industry in the Mississippi valley. Consider the effect of a succeeding century of wars, invasions, pestilence, famine, and we may have the key to the apparent decadence of the North American Indians. These vicissitudes have marked the pathway of the most civilized nations. Conquest and progress followed by degeneration and decay is the lesson of history.*

There is no mystery in the disappearance of some of the mound building aborigines. Scores of tribes have become extinct during the last three centuries. An Indian trail is now almost unknown, even on the plains of the far West.

The Mandans, of the North-west, a modern tribe, lived in dwellings probably somewhat similar in character to those of the Stone Grave race. Catlin describes one of their villages, in the bend of a river, protected by a solid stockade and ditch. It resembled, in other respects, one of our ancient fortified villages in Tennessee. The Mandans burned, in kilns, an excellent variety of pottery. They played the game of "Chungke," with discoidal stones, as did the southern Indians a century and more ago. They were once a strong tribe; yet, under the fatal effects of disease and the unrelenting persecutions of the Sioux tribes, they have become nearly extinct.† Here, doubtless, is an epitome of the life and fate of some of the mound building tribes.

The Shawnese have had a pathetic history. Dr. Brinton calls

* The most civilized nation of our ancient western world, the Mayas of Central America, who built the imposing and almost noble structures at Palenque, have lapsed into a state bordering upon savagery since the Spanish conquest.—Native Races (Bancroft), Vol. IV, page 280.

† Mound Builders (Force), page 76.

them the "Gypsies of the forest." Their eccentric wanderings, their sudden appearances and disappearances, perplex the antiquary and defy research.* We first find them in actual history about the year 1660, living along the Cumberland river, or along the Cumberland and Tennessee rivers.† Tradition tells us they had come from the far Sewanee, or Shawnee river, of Florida, and from the Savannah, in Georgia. An ancient Shawnee village and stockade fort was built upon the present site of Nashville.‡ They were a fine type of the native American—the tribe, later, of Logan and Tecumseh.||

For a century or more they held sway. Their domain extended from the Ohio to the Tennessee river; but these fair possessions were the constant envy of their neighbors. They were never at peace. No wonder their ancient homes upon the Cumberland were fortified like the walled towns of feudal Europe! Each settlement, probably, had its castle of security. The Iroquois, on the north, pressed them through years of unrelenting hate. The Chickasaws and Choctaws preyed upon them from the south; the Cherokees from the south-east. The Shawnees were finally overwhelmed and scattered. They fled beyond the Ohio. Their towns and villages were desolated and left in ashes, and they were compelled to pay tribute to that powerful confederacy of warriors—the Six Nations.

They occasionally stole back to their ruined homes in the land of their fathers.§ The Iroquois, their ancient enemies, sometimes hunted the Cherokees even to the banks of the Tennessee, yet no claimant dared to build a permanent home in all this fair territory; and for sixty years or more, prior to its first settlement by the

* Life of Pontiac (Parker), Vol. I, page 32.

† American Antiquarian (M. F. Force), April, 1881.

‡ Ramsey's History of Tennessee (Charleston, 1853), page 70.

|| Tecumseh's father was a Shawnee Indian, his mother a Creek—an indication of the intermixture of tribes.

§ In the vicinity of Nashville we have found a number of relics of iron, French traders' pipes, and other evidences of modern Indian occupation.

whites, Tennessee was an uninhabited wilderness. The trees grew still larger upon its mounds and earth-works. Its maize fields again became a forest. President William Henry Harrison, an eminent antiquarian in his day, tells us, in a paper relating to the history of the Indians, that even "the beautiful Ohio rolled its amber tide until it paid tribute to the Father of Waters, through an unbroken solitude for nearly a century."

Dr. D. G. Brinton, in a carefully prepared paper, maintains that the ancestors of the Chatta-Muskogee tribes were probably the original mound building stock or family. These tribes embraced the Choctaws, Chickasaws, Natchez, and other allied southern Indians. Within the historic period, as we learn from early writers, they were builders of earth-works and mound defenses. The widely spread traditions of the northern Indians, indicating that the race that built the imposing structures in the Ohio valley were driven to the southward, also favored this view; as does the fact that the mounds of Tennessee do not appear to be of so early a period as the Ohio mounds.

The Natchez were one of the oldest and most advanced tribes among the southern Indians.*

Their own traditions, as reported by the French and Spanish explorers, and by DuPratz, the early historian of Louisiana, seem to confirm the view that they have been descendants of one of the prehistoric tribes of mound builders. DuPratz resided among the Natchez Indians. He had the confidence of the "Great Sun" and of the "Keeper of the Temple," and ample opportunity to obtain full knowledge of the history and legends of this interesting tribe. "According to their traditions," he states, "they were the most powerful nation of all North America, and were looked upon by the other nations as their superiors." Their territory, as reported

* Dr. Joseph Jones, eminent authority on this subject, regarded the Natchez as probably belonging to the ancient family of mound builders.—*Aboriginal Remains* (Jones), page 125. Dr. Rau, of the Smithsonian Institution, stated that the Natchez were "perhaps the most civilized among the North American Indians."—*Smithsonian Report*, 1866.

by DuPratz, extended from the River Manchac, or Iberville, near the Gulf, to the River Wabash, and they had eight hundred "suns," or princes; but the multitude of rulers, their pride and jealousy of each other, their inhuman practice of sacrificing their subjects, and "the prejudices of the people," finally contributed more to the destruction of the Natchez than their long and bloody wars.*

Their traditions dated back to a period before the advent of the first Spaniards. They also appear to indicate a knowledge of the pueblos of New Mexico, as early as the year 1730, when DuPratz resided among them, and before information as to the pueblo districts was generally distributed, as they gave accounts to DuPratz of a people to the west or south-west "who had a great number of large and small villages, which were all built of stone, and in which there were houses large enough to lodge a whole tribe."†

Whether the manifestations of the limited culture discovered among the mound-remains of the Mississippi valley were of indigenous growth, or in part or whole of exotic origin, it seems a most reasonable hypothesis, that it descended upon or left its impress upon tribes of southern Indians like the Natchez, who, when first discovered by the whites, retained many evidences of this culture, and in the humble arts of domestic life were much in advance of the red Indians of the North.

This appears to be more in accord with the truth than the more popular theory that the mound builders belonged to some superior and very advanced race, and that they and their arts and industries became wholly extinct, or were spirited away to some unknown region.

The remains found sometimes show strange contradictions, evidences of apparent culture in the midst of real rudeness; but upon investigation, they do not indicate an advanced state of society. Rare and unique forms of stone, clay, bone, shell, and copper, mysterious objects whose exact uses we can not always dis-

* History of Louisiana, Vol. II, p. 146.

† History of Louisiana, Vol. II, p. 113.

cover; beautiful implements, wrought with infinite labor and no little skill, have been found; yet all are consistent with the theory of a comparatively rude condition of society.

No well authenticated prehistoric implement, or article of iron, or evidence of manufactured iron, has been found, excepting objects made from the unmelted ores. Objects of native copper, hammered into form, and an occasional ornament of hammered silver, have been discovered, but none of melted copper, or bronze, or silver. Even the uses of melted galena, or lead, the most easily worked of all the native ores, were not discovered.

No writing or intelligible inscription indicating a written language or decipherable symbol language, no pictograph, or tablet, or inscription in the higher grades of hieroglyphic writing, no cloth or fabric of the finer grades of manufacture, no piece of regular masonry or of well-built stone wall, or house, or house foundation of stone, or walled well, or house or wall of brick, or remains of architecture worthy of the name, have been found in all the vast territory of the Mississippi valley.*

The idols and images of stone found are usually very rude and of a low grade of sculpture. Vessels and other objects of well-burned and of sun-dried clay are found in abundance, of original, varied, and even artistic forms, indicating, probably, the highest development attained north of Mexico. Occasionally, some Indian artisan seems to have reached almost the standards of modern art in clay. We are surprised at the quaint vessels and figures, and at their graces of outline. They have almost the ring of vitrified ware: but, upon surveying the pottery as a whole, it is found to be essentially primitive. It is without glaze. It shows no knowledge of the potter's wheel, and was of necessity manufactured and used amid rude surroundings and in simply constructed huts or houses.

* The remains of the supposed burned brick wall of the ancient mound at Sadszerville, Mississippi, have been found to be only fragments of burned clay from the ancient clay hearths of the mound, or clay plaster from the sides of the primitive dwellings. Some remains of house walls of stone have been found at Moundville, but they are very rude in character.

of a character so temporary and perishable that scarcely a trace of them remains. The aristocratic villagers who used the ornamented vessels of clay found in the cemeteries near Nashville doubtless dined after the Indian style on clay floors, and certainly used muscle shells for spoons, and chipped stone knives—as these articles were found carefully laid in their graves beside the vessels of clay containing provisions to feed them on their way to the spirit land.

Indeed, all the infinite variety of articles and antiquities found within the limits of the mound area, once occupied by a widely spread native population, after centuries of exploration, tell only the same positive story of primitive barbaric life, the life of the town, village, and hunting Indian.

The author has personally assisted in exploring many mounds and ancient cemeteries. He has also carefully examined a large number of collections and museums of American archæology. The result is disappointing to any one searching for evidences of ancient civilization among the remains of the Mississippi valley. He will find only the remains of ancient savagery or barbarism, with here and there a glimpse of semi-civilization. The illustrations in the chapters following present some of the highest types of prehistoric art yet discovered north of Mexico, and, therefore, in themselves, offer the strongest argument possible in favor of “the superior race, and advanced culture,” theory; nevertheless, we are of opinion that they are not sufficient to modify the general views expressed upon this subject.

CHAPTER II.

THE ANCIENT GRAVES AND EARTH-WORKS.

The Stone Graves—Sumner County Earth-works—The Lebanon Works—The Big Harpeth Works—Old Town—The West Harpeth Works—The Stone Fort—The Savannah Works—Other Ancient Works—Rock Houses—The Age of the Stone Graves—The Chronicles of De Soto—Description of Native Towns Visited—Other Historic Testimony—Battle of the Horseshoe—Mounds Constructed Since the Discovery—Who were the Mound Builders?—The Relation of the Stone Grave Race to the Mound Builders of Illinois, Arkansas, and Missouri.

THE ancient tumuli, embankments, and defensive works found in Tennessee, present the general physical characteristics of the earth-works of the mound building tribes of the central district of the Mississippi valley. They are found along all the main streams, and in nearly every section of the state. In East Tennessee, they vary in form and construction. A number of them have been explored by the assistants of the Bureau of Ethnology, and interesting details regarding them have been published in its annual reports and in the reports of the Smithsonian Institution. Dr. Joseph Jones and Prof. F. W. Putnam, two most intelligent archæologists, have explored several of the mound groups of Middle Tennessee, and published the results of their investigations.*

The earth-works of Tennessee and the Cumberland valley are usually simpler in form than the elaborate works in the Ohio valley or the larger works along the Mississippi river. They spring up from the green sward, or in the cultivated fields, or in the depths of the forests; sometimes in the steep, cone-shaped forms of their original outlines, but more frequently the elevations are slight and scarcely noticeable. Occasionally, a mound is found alone, and

* *Aboriginal Remains of Tennessee.* J. Jones. Published by the Smithsonian Institution. Eleventh Annual Report of the Peabody Museum, page 305.

apparently apart from any system of defenses or connecting works; but they are generally in groups, with inclosures or embankments, or near the remains of defensive works that appear to have been occupied as fortified towns, villages, or camps. The usual height of the chief mounds of the groups was probably originally from fifteen to thirty feet. A few mounds in the state, however, are much higher.

The stone grave cemeteries constructed by the ancient inhabitants of the Cumberland and Tennessee valleys indicate the presence at one time of a very large population. Like their successors of the white race, the aborigines usually selected the most fertile, well watered, and accessible locations for their homes. Here they had healthful and picturesque surroundings. The burial grounds on Brown's creek, near Nashville, recently discovered, contain three or four thousand graves, and smaller cemeteries have been found on nearly all the adjoining farms. Prof. Putnam and his assistants explored about six thousand graves, the majority of them in the vicinity of Nashville. Dr. Jones examined a large number, in some fifteen different cemeteries. Dr. Troost, the learned geologist of Tennessee, reported six very large cemeteries near Nashville. He stated, "that the ancient burial grounds on the banks of the Cumberland river, opposite Nashville, extended, in 1844, more than a mile along the river." *

These remains of the Stone Grave race are found in other sections of the state, but their most populous villages were in the valleys of the Cumberland and Tennessee, and in Southern Kentucky. Graves of similar construction have also been discovered in several localities in Southern Illinois, in Southern Indiana, in Georgia, and in Ohio. Doubtless, they would be found in West Tennessee, and in the mound and pottery districts of Arkansas and Missouri, but the necessary stone could not be obtained in these alluvial regions.†

* Transactions of the American Ethnological Society, Vol. I, page 359.

† A few stone cists have been found in Perry county, and near Fenton, Missouri. Conant, pages 45, 46. There were no quarries of stone of easy cleavage in

The rude cists or box-shaped coffins are made of thin slabs of stone. Sometimes the stones are broken or cut, or rubbed down so as to fit evenly and form a well-shaped case, but more frequently they are rudely joined together. Occasionally, they are found in mounds or layers, four or five tiers of graves deep. The graves are usually six or seven feet long, a foot and a half to two feet wide, and eighteen inches deep; but graves of greatly varying sizes and shapes are found intermingled with those of more regular form. The children's graves are proportionately smaller. Frequently, the same cist contains two or three skeletons, and is not more than three or four feet long, the bones having been placed in a pile irregularly within it, indicating that they were probably interred long after death, and after some intermediate preparation or ceremonies similar to the burial customs of some of the historic tribes.*

Many of the graves in the vicinity of Nashville are lined with large, thick fragments of broken pottery, as neatly joined together as if molded for the purpose. The author recently excavated several graves of this kind on Hon. W. F. Cooper's farm, near Nashville. The pottery burial cases were symmetrically formed, and seemed to be molded in single pieces, until an attempt was made to raise them, when they fell apart, and were found to be composed of neatly-joined fragments of large vessels; the heavy rims of the vessels, more than an inch and a half thick, having been used as rims or borders for the burial cases.

A small burial case of well-baked clay, carefully molded in two sections, was found some years ago by Captain W. P. Hall, in a low mound at Hale's Point, Tennessee, and is shown in Figure 1.

the New Madrid district. Conant, page 60. A few stone graves have been found in McNairy county, West Tennessee.

* There is no foundation whatever for the popular myth that the graves of a race of pigmies were found near Sparta, or elsewhere in Tennessee. The finding of a large number of short stone graves doubtless gave rise to this erroneous idea. Haywood, the early historian of the state, who sometimes wove fables into his history, confirmed the statement; but it is not true. Dr. Joseph Jones reports that, "he examined the bones of fifteen aboriginal cemeteries, without discovering a single skeleton of an adult of unusually small size."

Prof. W. H. Pratt gives the following description of it: "It is of rude, irregular, quadrangular form, made in two parts. The lower, or case proper, is twelve inches long, seven inches wide, and five inches deep, inside measure, the upper edge being slightly bent inward all around. The upper part, or lid, is of similar form and dimensions, being very slightly larger, so as to close down over the other part about one and a half inches, and is somewhat more



FIG. 1.—BURIAL CASKET OF POTTERY (HALE'S POINT, TENNESSEE).*

shallow. As the lid does not fit very perfectly, the joint around the edge has been plastered up with clay. When found, it contained the remains of a very small child, reduced to dust, except that some of the skull, jaw, and limbs retained their form, crumbling rapidly, however, upon removal and exposure to the air. There were also found two or three dozen small shell beads. Excepting the remains described, the case was entirely empty. The case weighs six and a quarter, and the lid just six, pounds." This is

* It is now in the collection of the Davenport Academy of Sciences.

one of the very few vessels that would seem to have been constructed especially for mortuary purposes.*

Nearly all the stone graves are found to be filled with earth inside, by infiltration. The roots of trees have penetrated them. The very skulls are usually packed solid with earth, but now and then the iron pick will strike a hollow cist in its original state, and the fortunate explorer may be rewarded by finding a vessel or bowl of clay, perhaps two or three, within easy grasp, beside the still uncovered skeleton, and he will thus secure a better opportunity of observing at his leisure all the interesting details of the burial.

The vessels of pottery, which probably once contained food and drink for the journey to the "happy hunting ground," are usually in some convenient place beside the body—sometimes within the very bones of the hand ready for use. Spoons of shell, generally inside the vessels, implements for eating, and valued mementoes, are also found.†

These stone graves are not always discovered in cemeteries or large groups. Their location upon almost every large farm in the central counties of Tennessee indicates not only the presence of a very large population, but that it was generally and widely distributed throughout the country, probably in peaceful settlements through a long period of time, thus doubtless enabling this ancient race to make progress in the simpler arts and industries, beyond the status of the more savage tribes.

Sometimes a little cluster of stone graves is found, with the usual accompaniments of pottery and rude ornaments, like many modern plantation burial places, containing the remains of a single

* W. H. Holmes. in Report Ethnological Bureau, Vol. IV, page 381.

† For further information as to the methods of burial and construction of graves, the reader is referred to the valuable publications of Dr. Jones and Prof. Putnam. A number of cave burials in Tennessee were reported by Haywood and the early writers. The bodies were discovered wrapped in skins, mattings, cloth, and feather fabrics, somewhat resembling the mummy burials of Mexico, Peru, and Alaska. The saltpeter of the caves preserved them from decay. The author has not been able to find any trace of the remains of these cave burials in the public or private antiquarian collections of Tennessee.

family, or group of families, that doubtless lived an agricultural life in its own farm dwellings. The remains sometimes found in these small isolated burial grounds show that some of these villagers or country people must have been supplied with many of the domestic conveniences enjoyed by the inhabitants of the larger towns.

The cemeteries of the fortified towns and villages were usually within the lines of defense, although scattering graves are found outside.

The system of fortifying these settlements may not have been adopted in the earlier stage of occupation, but probably grew necessary later, as a protection against the inroads of more powerful neighbors, and may indicate the beginnings of the wars and changes that ultimately forced the Stone Grave race from its home in Middle Tennessee. The apparent absence of the remains of forts, inclosures, or defensive works, and the evidences of the very large population that centered in the immediate Cumberland valley, and within a radius of ten miles from Nashville, seem to indicate that the well-fortified settlements in the adjoining counties of Sumner, Wilson, and Williamson, were outlying or frontier forts or defenses, especially designed to protect this large interior population in the neighborhood of Nashville from attack on the north, east, and south. Forts were probably not needed on the western and north-western sides, already occupied by villages and settlements of the same race. Within the protecting semi-circle of these outlying forts it appears from the remains found, that the industrious and somewhat progressive race of stone grave builders lived through several and perhaps through many generations.

Groups of earth-works, representing several of these outlying forts or fortified villages, may still be seen in the adjacent counties, in a good state of preservation. A ground plan or map of the works on the Rutherford-Kiser farms, in Sumner county, near Sandersville, Tennessee, about twenty miles north-east of Nashville, as they now appear, will give a tolerably correct idea of one of these ancient forts.

This work incloses about fourteen acres. The earth lines and

smaller mounds in the cultivated field are nearly obliterated, but in the woodland they are well preserved. The chief mound near the center, nearly twenty-six feet high, has still its flat top platform, its sharp outlines and steep sides. It is about three hundred and eighteen feet in circumference, and is entirely artificial, having been constructed of earth excavated near its base. The small elevations represented on the plan are burial mounds, with stone graves radiating from the center. The mounds next in size were

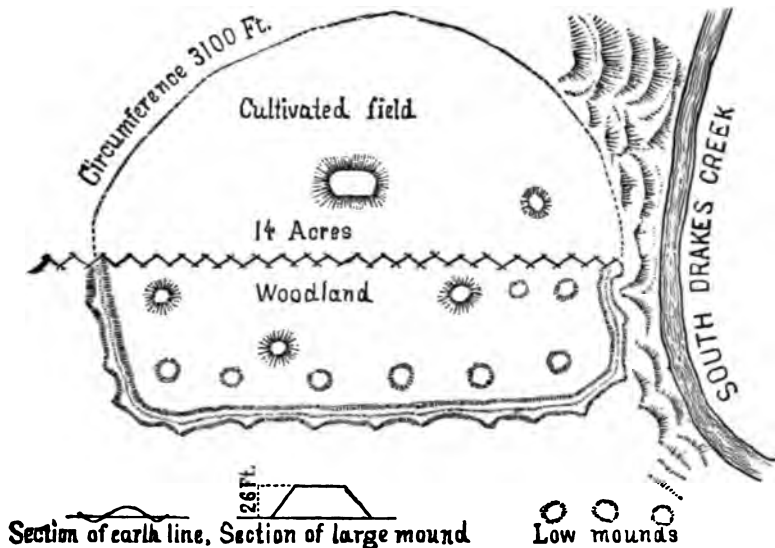


FIG. 2.—MAP OF THE EARTH-WORKS IN SUMNER COUNTY, TENNESSEE.*

probably formed by the debris of the ancient dwellings. They are circular or elliptical in form, averaging about thirty feet in diameter, with the remains of burnt clay or ancient fire hearths in the center. At irregular intervals along the earth lines in the woodland, angles of earth project about ten feet beyond the general line, indicating the location of towers or rude bastions in the stockade or wall line. Some of them were doubtless protected openings or gateways. In the burial mounds have been found many fine imple-

* Surveyed by W. H. Edwards, Esq., and drawn by the writer.

ments and vessels of pottery. At Castalian Springs, or Bledsoe's Lick, in Sumner county, aboriginal works of much interest may also be found.

The ancient earth-works on the Lindsley farm, near Lebanon,

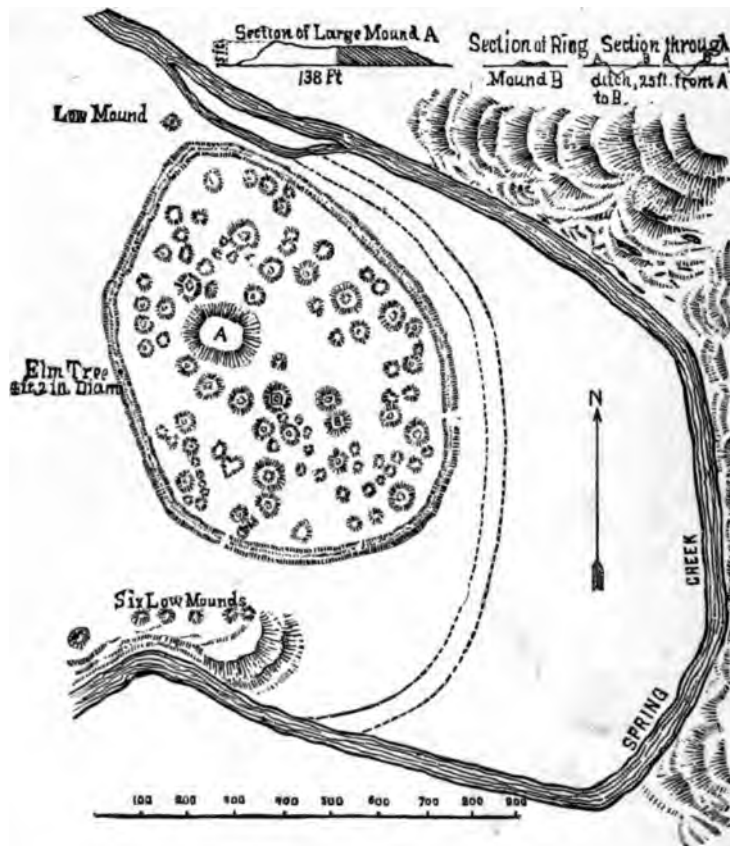


FIG. 3.—THE EARTH-WORKS NEAR LEBANON, TENNESSEE.*

Tennessee, about thirty-five miles east of Nashville, are of the same general character.

This is a good type of an ancient fortified or walled settlement. It contains about ten acres of land. The usual great mound is near the center (A). A large number of the smaller elevations were

* Map reduced from Prof. Putnam's plan in the Eleventh Annual Report Peabody Museum, page 338.

found to be the remains of dwelling-houses or wigwams. When the earth was cleared away, hard, circular floors were disclosed, with burnt clay or ancient hearths in the center, indicating that these habitations were probably very similar in form to the circular lodges of many tribes of modern Indians, arranged for fires in the center, and doubtless they had openings in the roof to let out the smoke.

The fact that the houses or wigwams were irregularly scattered within the inclosures, also establishes the primitive character of the settlement; yet, beneath the floors of these rude structures,* and within the adjacent burial mounds, were found some of the finest specimens of pottery and ancient art yet discovered in the mounds, indicating that these villagers of the Stone Grave race had probably reached a stage of development as advanced as that of any of the aboriginal inhabitants of the Mississippi valley. Some of these fine specimens will be illustrated in subsequent chapters.†

On the south-west bank of the Big Harpeth river, in Williamson county, Tennessee, on the De Graffenreid farm, about two and a half miles from Franklin, the county seat, and twenty miles south of Nashville, vestiges of the ancient ditch and embankment of a fortified settlement are still visible, although the land has been under cultivation for nearly a century. The inclosure contains about thirty-two acres of land.

"The earth-work," as described by Dr. Joseph Jones, who carefully surveyed it, "is in the form of a crescent or semicircle, three thousand eight hundred feet in length, with the ends resting on an impassable, almost perpendicular bluff of the river, rising about forty feet from the water's edge. The land slopes gradually

* In exploring the remains of the ancient pueblos, in Arizona, in 1887, Frank Cushing and Dr. TenKate found it was the common practice of pueblo Indians to bury the dead under their dwellings. It was also a custom of the Creeks, Chickasaws, and other historic tribes.

† In the Eleventh Annual Report of the Peabody Museum, will be found Prof. Putnam's interesting account of his explorations in this group of works, with illustrations of the relics discovered.

away from the earth-work. The situation was admirably chosen for defense, and for the maintenance of a protracted siege, as there is an abundant supply of drinking water, and the soil of the inclosure is of great fertility.

“ Within the earth-works are nine mounds; the largest, marked A in the following plan, resembling a parallelogram, the sides and angles of which have been rounded by the plowshare, is two hundred and thirty feet in length, one hundred and ten feet in breadth,

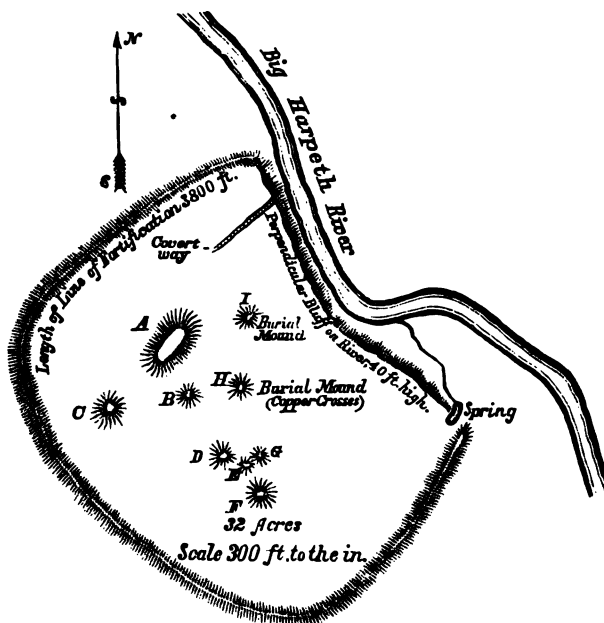


FIG. 4.—PLAN OF THE DE GRAFFENREID WORKS, WILLIAMSON COUNTY, TENNESSEE.*

and sixteen feet in height; the remaining mounds vary from one hundred to twenty-five feet in diameter, and from one to four feet in height.

“ When the ground inclosed by the earth-work was cleared, about forty years ago, the mounds and ditch are said to have been covered with large trees, equal in size and age to those in the surrounding forests. A white oak four feet in diameter is said to have

* From *Aboriginal Remains of Tennessee* (Jones), page 56.

stood in the ditch. There were seven 'passways' over the works, at convenient distances from each other, and about eight feet wide, as long as the earth remained as the aborigines had left it. At that time, the ditch was five or six feet wide and three or four feet deep. The earth forming the embankments appears to have been thrown upon the outside, so that the ditch was within the line of fortifications. Both the earth wall and ditch have been greatly altered by the weather and by the plowshare, so that at present they are in some places scarcely visible, and it is impossible to determine either the original height of the one or the depth of the other. Near where the intrenchment strikes the river bank, at the commencement of the steep bluff, is a large and never-failing spring of excellent water. At another portion of the inclosure, indicated on the plan, there is a covert-way, or ditch, leading to the bluff, and down through a crevice to the river's edge.

"The large, oblong mound, A, had no stone graves in its upper layer, but a shaft sunk into its center, through its entire depth, revealed, near the bottom and close to the original surface of the earth, a hard, red, burned surface or altar, with ashes and charcoal resting on it. It appears that the mass of earth composing the mound had been erected upon the altar.

"The four next largest mounds (B, C, D, and F) in like manner contained no stone coffins or human bones, but appeared to have been used for similar purposes as the large oblong mound; the interior giving evidence of having been burned with very hot fires, the red burnt stratum resembling bricks in hardness, so that it was possible to dig out with a pick-ax compact pieces of it a foot thick.

"The burial mounds were four in number and smaller in size, and lay between this outer chain of sacrificial mounds and the river."

The main tumulus contained nothing of interest, excepting the burnt clay hearth, with ashes and charcoal, near the natural surface, doubtless the remains of the ceremonies or sacrifices incident to its erection. From other sources and recent investigations, we learned

that these large and generally central mounds were probably raised foundations, upon which were erected the houses of the chief and his family or retainers, or perhaps the council-houses of the tribes. From their commanding position, they were doubtless also used for observation and for directing forces in case of an attack.

The elevations next in size (B, C, D, and F), averaging about two feet high, were oblong, and from thirty-three to sixty-six feet in diameter. They contained no burial remains. Recent mound explorations disclose the fact that the hard burned clay found must have formed the ancient walls and fire-places, or the hearths, of large family or communal dwellings, and that these low mounds are simply the debris or remains of these large houses.

From burial mounds II and I, Dr. Jones obtained a number of remarkable relics. In the center of mound H, was a carefully constructed stone grave, octagonal in form. It contained a skeleton, which appeared to have been buried in a sitting posture.* On the right side, and within the very bones of the hand, was found a remarkable flint knife or sword blade, the fingers resting around the tapering end or handle. This beautiful implement was twenty-two inches long, and about two inches in width at the broadest portion. It is probably the longest and finest chipped stone knife known to archæology. An illustration of it will be found in the chapter upon chipped flint implements.

An earthenware vessel, seven inches high, was found on the left side, as if held in the hand, and two large sea shells lay on the right. Around this central octagonal grave were nine other stone graves, a form of burial frequently observed in Middle Tennessee. In one of them, four small, thin copper plates were found, stamped

* Bandalier reports that, in exploring the ruins of the pueblos in the valley of the Pecos, he found that the ancient Pueblo Indians buried their dead in stone graves, and in a sitting position.—*Papers Archaeological Institute of America*, No. 1, page 98. The practice of burying some of their dead in a sitting posture was common among the mound building tribes, and also among several tribes of modern Indians.

with rude crosses. They had probably been used as pendants or ornaments.*

Unique images, and many fine specimens of painted pottery and of shell-work, were found in these graves. Dr. Jones was of opinion, from the location of burial mounds H and I nearest the large mound, from the care exhibited in the burial, and from the fine quality of the relics found there, that these graves contained the remains of some persons or family of high rank in this ancient tribe of villagers.

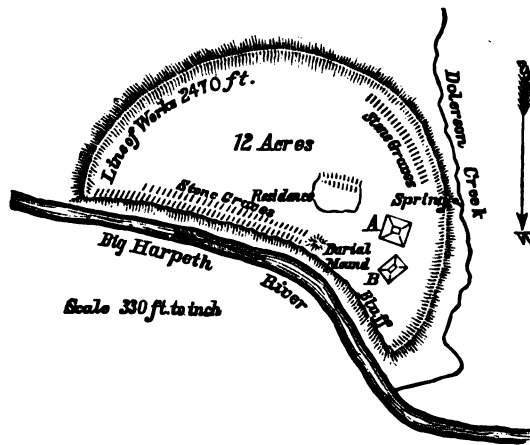


FIG. 5.—PLAN OF WORKS, MOUNDS, AND GRAVES AT OLD TOWN, WILLIAMSON COUNTY, TENNESSEE.†

The greater number of graves found in the adjacent fields and without the lines of defenses, seemed to indicate that the fort may have been used as a place of refuge for the neighboring population in times of danger, rather than as a place of permanent residence.

There is also an ancient fort at Old Town, on the Big Harpeth river, about six miles south-west of Franklin, Tennessee.

The works extend from the steep bluff of the river in a crescent form two thousand four hundred and seventy feet in length, and inclose twelve acres. They have been partly worn down by cultivation, but old residents state that thirty years ago the embankments were

* See illustration of these plates in the chapter upon objects of copper, No. 9.

† From *Aboriginal Remains of Tennessee* (Jones), page 82.

so steep that it was impossible to ride across them. A fine stream issues from the river's bank, within the lines. Two pyramidal mounds and a small burial mound are situated in the south-west corner of the works. The largest (A) is one hundred and twelve feet in its long diameter, sixty-five feet in its short diameter, and eleven feet high; the next in size (B) is seventy by sixty feet at the base, and nine feet high; and the small burial mound is thirty by twenty feet in diameter, and two and five-tenths feet in height. A large aboriginal population occupied the surrounding country.

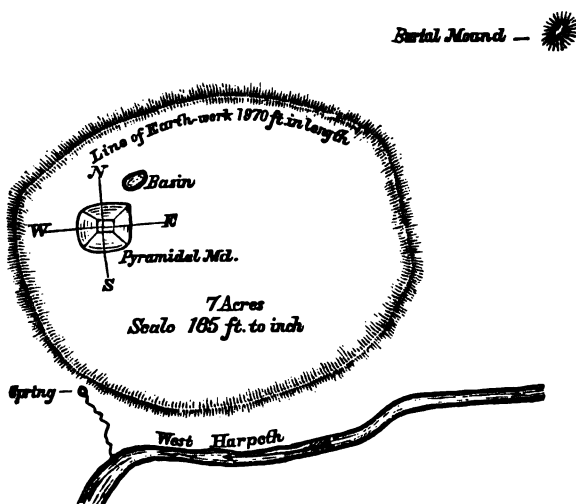


FIG. 6.—PLAN OF THE WORKS AND MOUNDS ON WEST HARPETH RIVER.*

A circular fort or inclosure, one thousand nine hundred and seventy feet in circumference, containing about seven acres, may also be seen on the north bank of the West Harpeth river, about three miles distant from the works at Old Town. (Fig. 6.)

The embankments and mounds are covered with large forest trees. Dr. Jones found an old oak stump within the inclosure, which showed some three hundred rings of growth.†

The main pyramidal mound is one hundred and ten feet in

* From *Aboriginal Remains* (Jones), page 79.

† This ancient tree may have been growing within the inclosure when occupied by its aboriginal builders.

diameter at the base, and thirty-five feet at the summit. Its mean height is but nine feet.

Dr. Jones also reports that: "Fortifications several miles in extent, inclosing two systems of mounds and numerous stone graves, lie along the Big Harpeth river, about sixteen miles below Old Town, at Mound Bottom and Osborne's Place. Within these extraordinary aboriginal works, which inclose the sites of two ancient

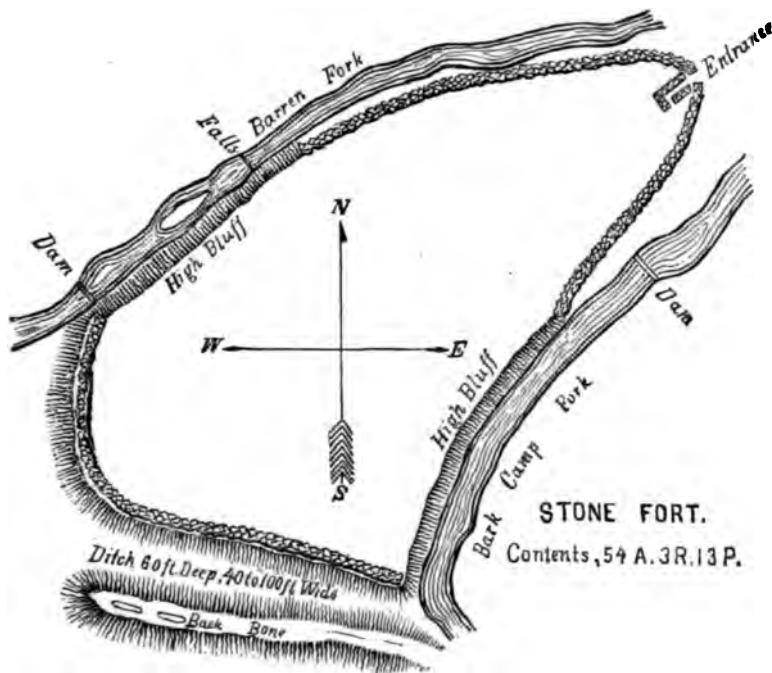


FIG. 7.—PLAN OF STONE FORT NEAR MANCHESTER, TENNESSEE.*

cities, are found three pyramidal mounds, about fifty feet in elevation, and each one exposing about one acre on its summit; and besides these are lesser mounds. The old road or trail which connected these ancient towns can still be recognized in the forest, the well-worn and compact path being in some places a foot or more lower than the general surface of the surrounding soil." †

* From plan in *Aboriginal Remains* (Jones), page 100.

† *Aboriginal Remains* (Jones), page 36.

The largest and most elaborate ancient fortification of Middle Tennessee is known as the "Stone Fort," and is situated in the forks of Duck river, near Manchester, in Coffee county. The main wall, now varying from four to six feet high, is partly constructed of irregular, loose stone from the river bed or the adjoining bluffs. There is no regular wall or masonry, but the rocks and earth are heaped together promiscuously, forming a strong embankment, connecting with the precipitous river bluffs. (Fig. 7, page 41.)

A wide, deep ditch in the rear of the works separates and protects them from the commanding ridge opposite. The entrance at the north end exhibits considerable engineering skill, and is similar in plan to some of the fortified gateways of the strongest ancient works in Ohio. Mounds of stone about three feet higher than the general wall, doubtless foundations for towers or extra defenses, were erected on each side of the entrance. On the inside, double protecting walls extend back from the opening, as shown in the small plan (Fig. 8), terminating at both ends in raised mounds of the same character, opposite the main entrance and the rear opening, the latter being concealed at the side. The enemy once within the main gateway, would find himself in *cul de sac* in this interior inclosure.

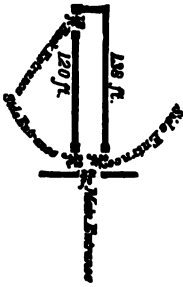


FIG. 8.—PLAN OF ENTRANCE.

Explorations made within this ancient fortress have revealed no stone graves or other remains of interest, or connecting it with aboriginal life in other fortified works. The Stone Fort was probably a military or defensive inclosure, not used as a permanent settlement.

There is a large mound, elliptical in form, thirty feet high, and six hundred feet in circumference, about a half-mile from the main entrance of this fort. It is constructed of earth and loose stone, but partial excavations have brought to light nothing of special interest regarding it.

On the east side of the Tennessee river, on the high ground adjoining the town of Savannah, Tennessee, there are extensive

earth-works, inclosing a group of mounds, some sixteen in number. They are of very great archæological interest. The largest mound is thirty feet high, over one hundred yards in diameter, and has a level area or platform on top. It occupies a central, commanding position, and probably overlooked nearly the entire line of works. The other mounds of the group ranged from twelve feet in height down to small elevations. The main lines of works measure, "north and south," one thousand three hundred and fifty yards,

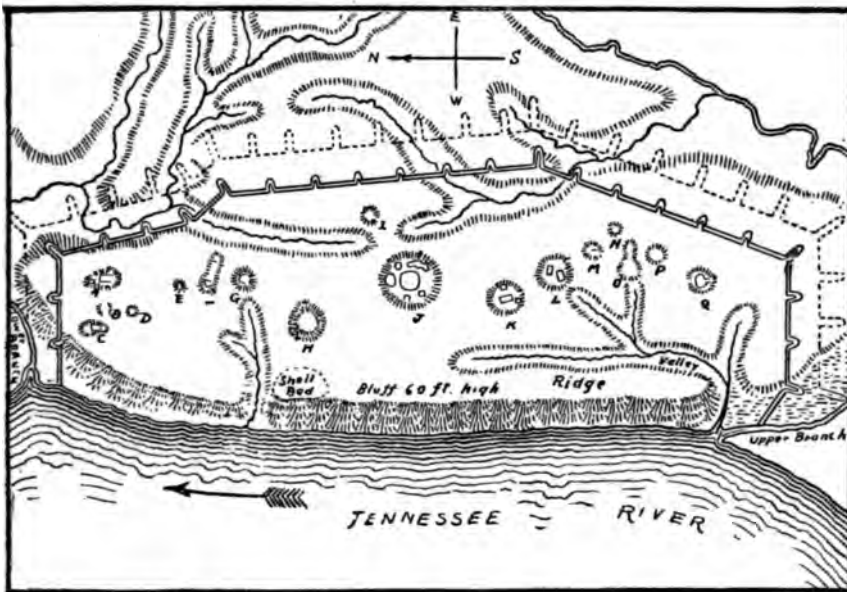


FIG. 9.—PLAN OF THE EARTH-WORKS AT SAVANNAH, TENNESSEE.

and are distinctly traceable. At intervals of eighty yards along the works, the remains of redoubts are found, extending to the front about twenty yards, and at the main angles, thirty yards. In front of the main line about fifty-five yards, and parallel to it, there is a second and less elevated line, probably the remains of an advanced line of stockades, now partly obliterated, but still traceable. The redoubts of the outer lines projected about forty feet in front of it, and alternated with those of the main line.

The plan of these works, from the Smithsonian Report of 1870,

(page 408), will give a more correct idea of its construction than the description.

Extensive excavations were made in these mounds, in 1870, by J. Parish Stelle, and from his valuable report made to that institution, we have obtained the information relating to it.

He "sunk an eight-feet shaft in the center of the large mound, down to the solid earth," and made a number of excavations in various parts of it, but discovered nothing of interest, excepting near the surface, the remains of a level burned clay or "tile" floor, in the form of "a crescent," about sixteen feet wide and forty-four feet long. It "seems to have been made by spreading tempered clay smoothly upon a leveled space of earth, and then hardening it by means of fire built on the top of it. There are no seams to indicate that it was made otherwise and laid in sections."

Mr. Stelle's experience in excavating this large mound does not differ materially from that of other explorers. The large central mounds of these southern groups of earth-works usually yield little treasure or information of importance, excepting burned clay hearths, ashes, and charred bones. They are the mounds for the chief's residence or for the council-house, or mounds of observation and for giving commands.

The burned clay surface was probably carefully prepared for use as a floor in some important building or residence. A few vessels of pottery, some implements, several skeletons, a number of copper ornaments, and a string of copper beads were found in excavating the smaller mounds.

Mr. Stelle discovered in one small "double mound" of the group, what appeared to be the remains of three furnaces, or furnace flues, built of clay, about six feet apart. They were about two feet wide and eighteen inches high. He states that, "over these, rude arches had been thrown, formed of irregular masses of tempered clay, probably sun dried. Some of these masses we took out entire. They were about as large as a man could handle conveniently, and, having been immediately in contact with the fire, were burned very hard.

"From the three main furnace trenches, went up a number of small flues, eight or ten inches in diameter, whose walls had also been formed of tempered clay, and were now burned very hard. At some points, they rose directly toward the surface of the mound, while from others they wound and twisted about through it in various directions, all skillfully planned, with a view to conveying the heat to all parts of the pile.

"Running through the mound horizontally, at different elevations, were large logs, still retaining their entire shape, but completely charred. 'We traced one from end to end, eighteen inches in diameter and twenty-two feet long.' The ends had been burned off by fire. There were also a number of upright charred wooden posts, which appeared to have been used to support or give strength to the furnaces. There were no indications of the use of the ax or other means of cutting the timbers than by fire. The whole earth about the furnaces showed evidences of having been heated and baked.

"There were no fragments of pottery, or dross, or cinders, or any thing else, upon which a hypothesis could be based touching the object for which the mound had been used. Ashes in the furnaces, bones, burned earth, and charred timbers, as already mentioned, were the only things found, after a most careful and exhaustive examination."

The only bones found in the furnace mound were two small piles of human bones dug up near the furnace flues.

No satisfactory explanation as to the remarkable features of this furnace mound has been offered, so far as we are informed. We have endeavored to present the main facts relating to it. The interested reader is referred to the original account in the Smithsonian Report for further particulars.*

* The Force pamphlet, on Prehistoric Man, Darwinism, and the Mound Builders, published by Robert Clarke & Co., 1873 (page 81), states that "it is not easy to believe that the intrenchments and charcoal mound were not made by Europeans." He thinks they might have been the work of De Soto and his men, who went into winter quarters in that general section after the battle of Chicaca. (Savannah is north of the route usually attributed to De Soto.)

A number of ancient pottery ovens or kilns have been found within the mound districts, of simpler character and smaller. We have discovered the remains of two small kilns in the vicinity of Nashville.

Squier and Davis report the discovery of pottery kilns in Panola county, Mississippi, "in which were masses of vitrified matter, frequently in the form of rude bricks, measuring twelve inches in length by ten in breadth."*

In Maury county, twenty-one miles south-west of Franklin, there is a large tumulus, known as the "Parish Mound," situated in the bend of Rutherford creek, near Duck river, a position most favorable for defense. Dr. Jones states that it is a beautiful square mound, twenty-five feet in height, six hundred and nine in circumference, and one hundred and fifty-two in diameter on the summit. There are two smaller mounds not far distant, but no traces of fortifications or stone graves are now visible. There is an ancient mound on the high bluff at the intersection of Piney and Duck rivers, near Centerville, Tennessee. It is said to have an altitude of about thirty-five feet. A line of breast-works, now about seven feet high, runs across the angle formed by the junction of the two rivers, inclosing the mound. It was a fine position for defense. There is also a group of mounds on Duck river, at Indian Ridge, in Humphrey county, Tennessee. One of them is said to be forty-seven feet high, another twenty feet, and a third fifteen feet high. At Hurricane Rock, on Duck river, near its mouth, there are two mounds; and on the east bank of the Tennessee river, near Johnsonville, Tennessee, there is a group of mounds.

There is a very extensive system of mounds in Madison county, in the western district. Mr. John G. Cisco, of Jackson, informs us that Mt. Pinson, the largest of the group, is about seventy-two feet high, and one thousand feet in circumference at its base. A pentagonal mound, with an altitude of about thirty-eight feet, lies about a half-mile west of Mt. Pinson.

* Ancient Monuments of the Mississippi Valley, page 195; Smithsonian Contributions, Vol. I.

There are also several mounds in Sequatchee valley, and mounds and defensive earth-works upon Caney fork of the Cumberland river, and in Smith county, Tennessee.

Three ancient stone barrows, conical in form, were found by the early settlers standing on a high bluff on Buffalo river, near the north border of Lawrence county, but time and the relic hunters have nearly destroyed them.*

It seems there were "cliff dwellers," or *rock shelf houses*, in ancient Tennessee. About eight miles from Jamestown, in Fentress county, upon the lands of Mr. Ben. R. Stockton, and in the midst of an apparently primeval forest, there is a projecting ledge of rocks, about one hundred and forty feet long, the overhanging stone cover being about thirty feet wide, and varying in height above the floor or surface of the ground from ten to twenty-five feet, forming a natural roof or shelter. At some period in the past, these sheltering rocks have been utilized as a fortress or a communal dwelling, as the entire floor beneath is a bed of ashes, averaging about five feet deep, and extending a considerable distance beyond the rock wall line. Mr. Stockton, the owner, states that he has hauled from three hundred to four hundred wagon loads of ashes from the "Rock-house," to use in fertilizing his farm, and that there are probably from eight hundred to one thousand more loads, and that nearly as much more had been washed down the hill. Thousands of trees must have been burned in creating this immense ash bed, yet the surrounding forests show no evidences of their removal, indicating that centuries must have elapsed since this ancient house or fort was inhabited.

There is a running stream at the foot of the hill, about two hundred yards from the Rock-house.

In excavating the ashes, two skeletons have been discovered,

* Dr. T. S. Evans and John M. Bass, Esq., recording secretary of the Tennessee Historical Society, visited these remains some years since. They discovered evidences of fire and of a duct, flue, or opening leading from the base of the stone mounds, but no relics of interest, and they reached no satisfactory conclusions as to the purpose for which they were erected.

partly surrounded by stone slabs, and indicating that the remains were buried in a sitting posture. Earthenware vessels of well-burned clay and crushed shells, and other relics have been found, showing that this natural castle had probably been occupied by the people of the Stone Grave race.

It must have been inhabited for a long time, and by a considerable force or family, as the ash bed approximates in size some of the prehistoric shell heaps along the sea shore. Doubtless walls or pickets made it a strong and comfortable fortress home during some long period of warfare or danger. Mr. Stockton informs us that there are a number of smaller "rock houses" in that vicinity.*

Having given a brief description of the main features of some of the ancient tumuli, inclosures, and defensive works in Tennessee, we pass to a consideration of the state of aboriginal society, as represented by them. Regarded simply in the light of their physical characteristics, they do not necessarily indicate a *status* more advanced than that of certain tribes of historic Indians. In fact, it has often been found impossible to separate the works of the mound building tribes from more modern known Indian works, or to draw absolute lines of distinction between them.†

From the excellent state of preservation of many of the skeletons, shell, bone, and horn ornaments and implements, sun-dried pottery, and articles of wood, found in some of the mounds and stone graves of Middle Tennessee, it can not be believed that all of the latter antedate the Columbian discovery, the visit of Pamphilo de Narvaez in 1528, or of De Soto in 1540. A greater number of skulls in a good state of preservation have probably been taken from stone graves of Middle Tennessee than from any other section

* Hon. W. A. Henderson, of Knoxville, visited this interesting rock house in Fentress county, and kindly called our attention to it.

† The earth-works of Western New York, long regarded as the unquestioned remains of an ancient race of mound builders, were, after careful exploration, declared to be the remains of the stockade forts of the Iroquois Indians, or their western neighbors, and of no great antiquity. — *Aboriginal Monuments of New York* (Squier), page 83; *Smithsonian Contributions*, Vol. II.

of the mound area; an indication that the Stone Grave race probably belonged to a late mound building period. A considerable portion—perhaps one-sixth—of the skulls examined by the author in his archæological explorations, have been found to be in very good condition, and a large number have been carefully removed and preserved. Prof. Putnam and his assistants obtained, for the Peabody Museum, a most valuable collection of sixty-seven skulls from the valley of the Cumberland. Frail, sun-dried vessels of clay are often found in the graves, in the damp loam and sand along the bank of the Cumberland river, in a better state of preservation than the burned ware found in the Ohio mound district. Leather thongs, or strings, not yet decayed, were found in a stone grave near Nashville, by Dr. Joseph Jones.* Prof. F. W. Putnam found the fragment of a string in a stone grave on Fort Zollicoffer.† In both cases, the copper ornaments to which they were attached aided in preserving them.

The author found in a stone grave in the same ancient cemetery, on the bank of the Cumberland, a small, well-preserved, carved wooden wheel. A thin film of copper covering a portion of it had probably partly preserved it. In an adjoining stone grave was found a small, but perfect, specimen of pottery, indicating a contemporaneous burial. We also found in a stone grave of the Noel cemetery, near Nashville, a small half-decayed ornament or piece of wood, partly covered with fragments of oxydized copper.

Fragments of wood not entirely decayed are frequently found in the burial mounds of Tennessee, also charred matting, burned corn-cobs, and other remains of perishable materials. These indications point to the comparatively modern origin of at least some of the graves and tumuli of the Cumberland valley.‡

* *Aboriginal Remains* (Jones), page 45.

† *Eleventh Annual Report Peabody Museum*, page 307.

‡ Dr. Joseph Jones reports, that in exploring the large mound near "Stone Fort," in Coffee county, he found the remains of a white man, deposited there *only about twenty years* prior to that time—an intrusive burial; and that he "was surprised

Haywood, in his "Aboriginal History of Tennessee," states that in 1819, a white oak tree growing on the top of the "Stone Fort," near Manchester, Tennessee, was cut down, and contained three hundred and fifty-seven "annulars" or rings.* This ancient landmark was therefore but seventy-eight years old when De Soto landed on the coast of Florida. An elm tree about four feet in diameter is still standing on the earthwork near Lebanon. These trees indicate a very considerable age, yet there are familiar old elms at Salem and in the suburbs of Boston and elsewhere in New England—elms planted since the advent of the Europeans—that probably equal in size the Lebanon elm or the largest trees now found growing upon the mounds.†

Assured, therefore, that some of the mounds and stone graves of Tennessee do not antedate the dawn of history, we naturally turn to the chronicles of the early Spanish discoverers for the key

to find the bones so much more decayed than those of many of the aborigines in the stone graves."—*Aboriginal Remains* (Jones), page 102. Dr. W. C. Blackman, an intelligent observer and physician, who resides in the midst of the stone grave cemeteries south of Nashville, and has been present at a large number of grave explorations, agrees in opinion with the author, that some of these stone graves are probably not more than three hundred or three hundred and fifty years old, and may be of considerably later date. They can not be less than about two hundred years old, as that is probably about the latest date of permanent Indian occupation. Dr. Rau, of the Smithsonian Institution, a noted expert in archæology, dug up a number of vessels of pottery at Cahokia creek, Illinois—ware of the same character and forms as some of the Tennessee and Missouri pottery—which he ascribed to the Indians, and stated that he regarded these remains as of comparatively modern origin.

"Only a hundred years," says Dr. Rau, "may have elapsed since they (these vessels) were made, yet it is also possible that they are much older."—*Smithsonian Report*, 1866 (Rau: *Indian Pottery*), page 349.

Dr. Wm. M. Clark found a well-preserved piece of string, or hemp fiber, wrapped around a copper spool, or ornament, in a stone grave near Brentwood, Tennessee.—*Smithsonian Reports*, 1877.

* *Aboriginal History of Tennessee*, page 170.

† The centennial of the elm tree planted at New Haven, Connecticut, in 1790, in memory of Benjamin Franklin, was recently celebrated. It was found to be four feet in diameter.

that shall unlock the uses and mysteries of some of these remains. The results fully justify our expectations. Narvaez, who attempted the conquest of Florida,* in 1528, with a well-appointed force, captured and destroyed several fortified Indian towns, surrounded by extensive fields of corn, but was finally compelled by the constant attacks of the natives to abandon the enterprise. Cabeza de Vaca, who accompanied him, makes a statement noticeable in this connection, "that the natives were accustomed to erect their dwellings on a steep hill, and around its base to dig a ditch as a means of defense.†

The testimony of De Soto's followers is more direct and complete. It has been three hundred and forty-nine years since these Spanish adventurers marched through Georgia, Alabama, Mississippi and Arkansas, states bordering upon Tennessee. The antiquities of these southern states being similar in their main features, De Soto's Spanish records contain historic evidence of great importance.

The meager accounts of Biedma, the more extended statement of "the gentlemen of Elvas," a Portuguese soldier of much intelligence, and the romantic narrative of Garcilasso de la Vega, considered together, are entirely in harmony with antiquarian research, and afford information unattainable elsewhere, as to the character of the towns, villages, houses, and of the interesting domestic life of the tribes in the territory through which De Soto's army passed.

Garcilasso de la Vega, in his history, says: "The town and house of the Cacique (or chief) of Osachile are similar to those of all other caciques in Florida, and, therefore, it seems best to give one description that will apply generally to all the capitals, and all the houses of the chiefs in Florida. I say, then, that the Indians endeavored to place their towns upon elevated places, but because such situations are rare in Florida, or that they find a difficulty in procuring suitable material for building, they raise eminences in

* Florida, at that time, included Georgia, Alabama, and Tennessee.

† Brinton: Nationality of Mound Builders.

this manner. They choose a place to which they bring a quantity of earth which they elevate into a kind of platform, two or three pikes in height (from eighteen to twenty-five feet), of which the flat top is capable of holding ten or twelve, fifteen or twenty houses to lodge the cacique, his family, and suite." *

Biedma also states, in speaking of the same province: "The caciques of this country make a custom of raising near their dwellings very high hills, on which they sometimes build their huts." "We journeyed two days, and reached a village in the midst of a plain, surrounded by a wall and a ditch filled with water, which had been made by the Indians." †

The principal towns of the natives were found by De Soto to be well fortified, and are described as "walled towns." They were surrounded by palisades formed by the trunks of trees, plastered with clay and straw, and surmounted at intervals with towers. They had protected openings or gateways. They sometimes contained a population of several thousand inhabitants. One town is mentioned containing six hundred houses. Some of the houses described were large enough to lodge a thousand or fifteen hundred people—great family or communal dwellings.

The house of the cacique, or chief of the settlement or tribe, was often built upon an artificial mound or raised foundation of earth. The so-called temples, or altars of worship, were also built upon raised foundations or mounds. A mound or temple is de-

* *Archæology of United States (Haven)*, page 57. As translated by Irving, La Vega says: "The natives constructed artificial mounds of earth, the top of each being capable of containing from ten to twenty houses. Here resides the cacique, his family and attendants. At the foot of this hill, was a square according to the size of the village, around which were the houses of the leaders and most distinguished inhabitants. The rest of the people erected their wigwams as near to the dwelling of their chief as possible."—*Conquest of Florida (Irving)*, pages 129, 317, 241.)

† *Historical Collections of Louisiana, Part II*, page 105.

"The cacique's house stood near the shore upon a very high mount made by hand for strength."—*Historical Collections of Louisiana (Gentlemen of Elvas), Part II*, page 123. *Historical Collections of Louisiana (Biedma), Part II*, page 103.

scribed as the place of burial of their dead chieftains.* The common houses or huts were built of poles or rude timbers, were plastered with clay and straw, and thatched with bark and cane. A number of towns were environed by artificial ditches filled with water. La Vega's description of the towns of Mauvila, in Alabama, may be of interest: "This was the stronghold of the cacique, where he and his principal men resided, and being on the frontier of his territory, it was strongly fortified. It stood in a fine plain, and was surrounded by a high wall, formed of huge trunks of trees driven into the ground side by side and wedged together. These were crossed within and without by others, smaller and longer, bound to them by bands made of split reeds and wild vines. The whole was thickly plastered over with a kind of mortar, made of clay and straw trampled together, which filled up every chink and crevice of the wood-work."

"Throughout its whole circuit, the wall was pierced at the height of a man with loop-holes, whence arrows might be discharged at an enemy, and every fifty paces it was surmounted by a tower, capable of holding seven or eight fighting men." "There were but two gates to the place—one to the east, the other to the west. In the center of the village was a large square, around which were erected the principal dwellings." †

A careful consideration of these features, with a map in hand, showing the present appearance and condition of any one of the many groups of ancient earth-works in Middle Tennessee—a group on the Harpeth river, or the works near Lebanon, Tennessee, or in Sumner county—will readily indicate the striking similarity of these remains to the ancient fortified towns described, and, indeed, will be conclusive of the fact that some of these earth-works are simply the remains of towns or villages, similar to those through

* *Conquest of Florida*. Irving, page 231.

† *Conquest of Florida*. Irving, pages 261, 262. See also *Gentlemen of Elbow*, for description of fortified towns. *Historical Collections of Louisiana*, Part II, pages 157, 158, 173. Also *Historical Collections of Louisiana*. Piedra, Part II, page 103.

which De Soto and his army passed in 1540-41, and then found active with busy life.

The long lines of earth that outlined the old walls, with their well-selected openings and projections, the ditches, the raised foundation mound, or pyramid of the chief's house—perhaps the mound that supported the rude temple or altar of worship—the rows of graves or burial mounds of the ancient cemetery, will still be found. Sometimes, the outlines of the low circular floors upon which the common houses or wigwams were placed may be seen, as in the Lebanon and Sumner county groups.

It requires little effort of the imagination to picture ancient life in one of these settlements in Tennessee; to crown the long, low lines of earth again with their strong palisades; to place the rude house of the chief upon its high pyramid overlooking the village and the far country; to repeople the council-house, the family dwellings, humble and spacious, hives of busy life; to replace the altar of the sun worshipers in its rude temple; to see the near-by burial mounds consecrated by the bones of their heroes; the gay colors of the warriors, the trappings of the hunters, the toiling of the women, the basket and cloth makers, the throng of the half-naked children and yelping dogs; the medicine man, with his herbs and kettles; the dealer in implements and vessels of stone, clay, and shell; the trader, perhaps from a far country, with his wares and strings of shells; the pottery makers, the pipe makers, the flint chipper and arrow makers, the fisherman—all necessary features of ancient town and village life in the South, as described by early writers in their accounts of the southern Indians.

Now, picture this town swept by the desolation of war or rudely pillaged by the marauding soldiery of De Soto; picture it after the lapse of three or four centuries! Fire and decay have consumed its strong palisades, its great houses, and all that was left of wood. The raised foundations and pyramids of earth, with their steep sides, may have become common-place hillocks. The dense forest has again spread over the scene. Giant trees are covering its graves and ditches. Time, and probably the plowshare of the

pioneer, have almost obliterated the earth lines of the crumbled wall.

You may thus have the true story of ancient life in Tennessee, and of many of the monuments and remains of the Stone Grave race

The young oaks that sprung up on the mounds that De Soto left desolate and unoccupied, in 1541, would now be three hundred and forty-nine years old—old enough, indeed, to be lords of the forest. Most of the earth-works in Tennessee and the Mississippi valley doubtless date from a period anterior to that time, some of them probably many centuries anterior. The testimony of his followers is given, however, to show their objects and uses, and to solve some of the apparent mysteries of their construction. Although De Soto did not visit the territory of the Stone Grave race in Middle Tennessee, his expedition penetrated into North-east Arkansas, where their *near kindred*, the pottery makers of that district, resided, tribes most intimately related to the inhabitants of the Cumberland valley, as indicated by many identities and analogies. De Soto found there, as his chroniclers state, “walled towns within a league or a league and a half of each other.” This was the territory of the Capahas, where Fathers Douay and Charlevoix found them in 1687 and 1721. The Peabody Museum of Archæology, some years ago, conducted a series of explorations in North-eastern Arkansas, under Mr. Edwin Curtis, who reported that he found the mounds there “were usually surrounded by earth-works and ditches, forming inclosures of from three to eighteen or twenty acres.”* These remains in Arkansas are very similar in character to the ancient fortified villages of Tennessee.

We learn from Dumont's Memoirs, that near the mouth of the Yazoo river, in Mississippi, were the villages of the Offogoulas and other southern Indians built upon mounds artificially made.†

Dumont also says the cabin of the chief of the Natchez Indians

* Fourteenth Annual Report of Peabody Museum, page 19; Mounds of Mississippi Valley (Carr), page 105.

† Historical Collections of Louisiana, Part V, page 43.

"was on an elevated mound." La Petit, a missionary among the Natchez Indians, mentions that "the residence of the great chief, or 'brother of the sun,' as he was called, was erected upon a mound of earth carried for that purpose." Du Pratz, the early historian of Louisiana, states that the house of the Great Sun of the Natchez stood upon a mound "about eight feet high, and twenty feet over on the surface," and that the temple of the priest was on a mound about the same height.*

It is a matter of comparatively recent history, that when the French and Choctaws defeated the Natchez Indians, in Mississippi, in 1730, the latter established themselves upon the Black river, where they erected mounds and embankments for defense. These defenses covered an area of four hundred acres, and could still be seen as late as 1851.† The pyramids of earth raised by the Choctaws over their dead when collected together, as described by Bertram, who traveled among these Indians, in 1777, are in the form of some of our southern burial mounds.‡ The Iroquois, nearly three centuries ago, had acquired a knowledge of military defense that the armies of the North and South had to learn during the late war by costly experience.||

La Salle tells us they built a rude fort of earth and timbers every night they encamped near the enemy.

Cartier found the site of modern Montreal occupied by a strongly fortified Indian town in 1535. On approaching it, nothing could be seen but its high palisades. They were made of the trunks of trees set in triple rows. Transverse braces formed galleries between them to assist the defenders. Lewis and Clark describe

* Brinton: *Nationality of the Mound Builders*.

† Pickett's *Alabama*, Vol. I, page 166.

‡ Bertram's *Travels*, pages 514, 515.

|| Their forts are often counterparts of our fortified works in Tennessee. One of these stockade forts of the Iroquois is minutely described by Champlain, who attacked it in 1610. A familiar print of this remarkable structure is given in the *Documentary History of New York*, Vol. III, page 15. The lines of stockades, the ditches, the great house inside, all recall some of the descriptions in the chronicles of De Soto, and show a marked similarity to our Tennessee remains.

the forts built by the Mandans and other Indians of the Northwest in 1805, with raised stockades, ditches, and fortified gateways. Captain John Smith, the founder and historian of the first Virginia colony, writes that the Indians of Virginia had "palizadoed towns." Bienville, of Louisiana, in 1735, attacked a Chickasaw village protected by a strong fort. He was repulsed, with heavy loss. The palisade wall was six feet thick, arranged with loop-holes, covered with heavy timbers.*



FIG. 10.—PLAN OF BATTLE OF THE HORSESHOE.

The plan of the "Battle of the Horseshoe," where the Creeks, protected by breast-works, fought General Andrew Jackson in 1814, indicates that these Indians possessed considerable knowledge of military defensive works. The original sketch drawn by the general, is appended to his interesting report of the battle, made to Governor Blount of Tennessee.†

* Historical Memoirs of Louisiana, Part V, page 110.

† Traced by the writer from the original report in the possession of the Tennessee Historical Society at Nashville.

General Jackson states, in his report, that "Nature furnishes few situations so eligible for defense, and barbarians never rendered one more secure by art. Across the neck of land which leads into it from the north, they had erected a breast-work of great compactness and strength, from five to eight feet high, and prepared with double rows of port-holes very artfully arranged. The figure of this wall manifested no less skill in the projectors of it than its construction. An army could not approach it without being opposed to a double and cross fire from the enemy, who lay in security behind it." Surely no prehistoric defensive work could receive a higher compliment from higher military authority!

We have, moreover, direct testimony that some of these mounds, long regarded as the exclusive work of an ancient and more civilized race, have been built by modern Indians since the period of European discovery. There are a number of instances, well authenticated, where articles, certainly of modern European manufacture and origin, have been found in mounds, undistinguishable in general character from more ancient mounds, and under circumstances affording no presumption of a possible intrusive burial.

Colonel C. C. Jones, in his *Antiquities of the Southern Indians*,* reports at least one absolutely certain instance where "a portion of a rusty, old-fashioned sword," evidently of European manufacture, was found in a mound with decayed bones of a skeleton alongside of pottery, and a stone celt. Atwater, a well-known archæologist, tells us of his discovery, in an Ohio mound, of articles of silver and iron of modern European origin. Prof. F. W. Putnam, in the fourteenth annual publication of the Peabody Museum, reports the discovery, by Dr. Mack, in Florida, of glass beads and ornaments of silver, brass, and iron, deeply imbedded and associated with pottery and stone implements of native manufacture, all found in a burial mound, and furnishing conclusive evidence that the Indians of Florida continued to build mounds over their dead after contact with the Europeans.

* *Antiquities of the Southern Indians*, page 131.

The National Bureau of Ethnology also reports, in detail, a number of similar discoveries in mound explorations in Tennessee, North Carolina, Mississippi, Illinois, Wisconsin, and Arkansas.*

* In a mound in East Tennessee, some six feet high, and which showed no signs of disturbance, an old-fashioned case knife was discovered near the bottom. Far down in another mound (in Tennessee) of large size, and also in comparatively modern Indian graves at widely different points, have been found little sleigh-bells, probably what were formerly known as "hawk bells," made of copper, with pebble and shell bead rattles, and all of precisely the same pattern and finish. "At the bottom of a North Carolina mound, part of an iron blade and an iron awl were discovered in the hands of the principal personages buried therein: with these were engraved shells and polished celts." A silver plate with the Spanish coat-of-arms stamped upon it, and the iron portions of a saddle, quite certainly articles that had belonged to De Soto's followers, were found, by the agents of the Smithsonian Institution, in an ancient mound explored in Northern Mississippi.—Work in Mound Exploration, Bureau of Ethnology (Cyrus Thomas), page 9.

We have also in our collection a beaded copper ornament, or harness button, evidently molded or made by machine pressure. It was recently discovered in an artificial "Indian mound" on Battle creek, in Wayne county, Tennessee, with ancient remains of pottery and shell, by Mr. D. G. Charles, of Florence, Alabama. It is certainly of comparatively modern origin, and was probably a harness ornament, and a relic of De Soto's campaign. It is illustrated in a subsequent chapter.

Col. C. C. Jones, writing of the earth-works of Georgia, which approximate in size the largest tumuli of the Ohio valley, states: "We do not concur in the opinion so often expressed, that the mound builders were a race distinct from, and superior in art, government, and religion to, the southern Indians of the fifteenth and sixteenth centuries.—Antiquities of the Southern Indians (Jones), p. 135.

Lewis H. Morgan, a most original and learned ethnologist, in an article upon the Houses of the Aborigines of America, states: "It will be assumed that the tribes who constructed the earth-works of the Ohio valley were Indians. No other supposition is tenable. The implements and utensils found in the mounds indicate very plainly that they had attained to the middle *status* of barbarism. They fairly belonged to the class of sedentary village Indians, though not in all respects of an equal grade of culture and development."—Contributions to North American Ethnology, Vol. IV, pages 198, 199.

Major J. W. Powell, the director of the National Bureau of Ethnology, has also given an opinion to the same effect. "With regard to the mounds so widely scattered between the two oceans," he states, "it may be said that mound building tribes were known in the early history of discovery of this continent, and that vestiges of art discovered do not excel in any respect, the arts of the Indian tribes known to history. The tracing of the origin of these arts to the ancestors of known

It has thus become a well-settled fact in American archæology, that some of the modern tribes of Indians have built earth-works and mounds within the historic period, and that it is not necessary, upon the evidence of the mounds alone, to attribute these works to any other, or more civilized, or more ancient race than the ancestors of some of the advanced tribes of southern Indians.

The ancient earth-works of Tennessee, and the states adjacent, must be regarded as fairly presenting characteristic types of the structures of the mound building tribes. The Etowah and Messier mounds of Georgia, the mound at Seltzerville, Mississippi, and the group in Madison county, Tennessee, are not less, in average height and cubical capacity, than the large mounds of the Ohio valley. The remains of the arts and industries found in the Tennessee mounds and graves, also show a state of development as advanced as that of any of the ancient inhabitants of the mound area; indeed, it is believed that the subsequent chapters of this volume will show that the interesting remains of the Stone Grave race, taken as a whole, indicate a more advanced state of art and industry in tribes, or stocks of tribes, is more legitimate."—Report of the Bureau of Ethnology, Vol. IV, page ix.

William H. Dall, an honorary curator of the National Museum, in his edition of Marquis De Nadaillac's *Prehistoric America*, thus states his conclusions upon this subject: "In closing this chapter, what, it may be asked, are we to believe was the character of the race to which, for the purpose of clearness, we have, for the time being, applied the term 'mound builders.' The answer must be they were no more nor less than the immediate predecessors, in blood and culture, of the Indians described by De Soto's chroniclers, and other early explorers—the Indians who inhabited the region of the mounds, at the time of the discovery by civilized men."—*Prehistoric America*, page 130.

Similar views are held by Lucien Carr, the very intelligent assistant curator of the Peabody Museum, who, in an elaborate pamphlet upon *The Mounds of the Mississippi Historically Considered*, has cited a number of authorities in support of this position. (See page 4.)

Dr. Gerard Troost, of Nashville, who explored a number of mounds and ancient cemeteries in Middle Tennessee, in his address before the American Ethnological Society of New York, made the somewhat remarkable statement that the ancients of the Stone Grave race "were less civilized than the Indians were when America was discovered by Columbus."—*Transactions of Society*, Vol. I, page 359.

cient Tennessee, than existed elsewhere within the limits of the Mississippi valley, not even excepting the mound districts of Central and Southern Ohio.

The mound builders of Tennessee probably belonged to the same aboriginal stock as the builders of the great mound at Cahokia, Illinois, the largest in the Mississippi valley. No one can compare the pottery from the stone graves of the Cumberland valley with the vessels dug up at the base of this great mound, and at New Madrid, Missouri, without observing that the majority of them are identical in form and material, and some of the pieces found in the two districts seem to have come from the hands of the same aboriginal potter. The author obtained about four hundred and fifty perfect vessels and images from the ancient cemeteries recently excavated near Nashville. Not less than one half of them are of the familiar New Madrid and Cahokia pattern, and many of them are almost exact duplicates of the vessels found by Mr. McAdams and others at the base of the great mound, as will be seen from the illustrations in chapters following.*

The intimate relationship that existed between the stone grave builders of Tennessee, and the other tribes of the Central Mississippi district, that probably built the system of large earth-works at Cahokia, Illinois, and the burial mounds near New Madrid, Missouri, and in North-eastern Arkansas, is further shown by the existence of similar stone graves in Illinois and elsewhere in this district, wherever suitable stone slabs could be conveniently obtained; also by the house ring or hut ring remains of the rude circular dwellings

* See illustrations and duplicate specimens in *Contributions to the* of Missouri, published by the St. Louis Academy of Science, and in *Vanished Races*, Conant, pages 79 to 93, and *Records of Ancient* : pages 47 to 57. The single cemetery explored near Nashville, produced of every one of the fifty-one forms illustrating Mr. Conant's ancient pottery of Missouri, excepting four, and produced many forms not shown in either of the two last-named volumes. The St. Louis Academy of Science contains one hundred and forty Missouri pottery. Seventy-three almost exact duplicates of in the cemetery near Nashville.

usually found in the ancient works of this district, by the similar forms of burial, and by the constant presence of the large, high, oblong, central mounds, characteristic of these works.*

There are features common to all the works of the mound building tribes. The differences are generally only in degree, and are not believed to be sufficiently radical to make it necessary to attribute them to different or distinct races.

There are also some traces connecting these tribes with the ancient pyramid builders of Mexico, with the pueblo builders and pottery makers of New Mexico and Arizona, and other Western tribes. These may be in the main but the outgrowths of a common inheritance, and of tendencies and beliefs springing from the same ancestry, and developing through long periods in different paths and under varied conditions.

Doubtless some offshoot of the race or races that built up the ancient civilization of Mexico or the semi-civilization on the banks of the San Juan and Rio Grande rivers, finally pushed across the wide plains to the eastward, and colonized the Mississippi valley. Another wave of immigration, probably a more barbarous race, appears to have come from the far north-west. The date was too remote for chronology. Centuries of time, migrations, changes, wars, extinctions, absorptions, must have succeeded.

The more sedentary village or partially village Indians of the South, and their industrious kindred of the Ohio valley, were probably the progeny of an ancient race from the South-west.†

* See description of an ancient fortified village, similar to our Tennessee works, in Union county, Illinois.—*American Antiquarian*, May, 1885 (Dr. Cyrus Thomas), page 133.

Also descriptions of the house rings in Missouri works.—*Footprints of Vanished Races* (Conant), page 60. Mr. Conant, who has written most intelligently on this subject, regarded the pottery makers of New Madrid, Missouri, and the builders of the Cahokia mounds as one and the same people.

The chroniclers of De Soto's expedition also describe a walled town, similar to our Tennessee fortified villages, in North-east Arkansas.—*Historical Collections of Louisiana*, Part II, page 172; *Conquest of Florida* (Irving, page 322.

† Explorations among the ancient remains of Mexico, prove them to be of very

The special influences of climate, soil, and environment that caused certain tribes of Indians to adopt the semi-agricultural state and others to adopt the hunter state, may readily be imagined; nor is it difficult to account for their military and defensive works, simple or elaborate, wherever they exist. The particular development, and religious or social rites, that led to the construction of the so-called effigy or figure mounds of Wisconsin and Ohio, and the groups of more exact forms, circles, squares, and the systems of terraced pyramids of the Ohio valley and of the South, offer some minor problems more difficult of solution, yet these mysteries are being unraveled. The rude effigy works seem a natural outgrowth of the religious rites and of the myths and superstitions of the Indian race, and Mr. Lewis H. Morgan, in an elaborate treatise, briefly considered in the next chapter, has offered a most reasonable explanation of the peculiar features of the Ohio structures.*

The author has visited a number of the great mounds in the Ohio valley. They are remarkable structures—monuments of labor and patience; and evidently the remains of a progressive and industrious race. Imagine a thousand Indians of the semi-agricultural class—women and children, men also—with baskets of willow and skins, bearing on heads and shoulders the alluvial soil from the river side, to raise a mighty memorial to some great warrior, or to build a strong defensive work as a protection against a dreaded enemy, or a towering home for an honored chief, and it will not be difficult to account for most of these large earth-works in Ohio, Georgia, or Tennessee.†

great age. Ruins of cities and towns are found, like the ancient cities of Asia Minor and Greece, to have been built upon still more ancient ruins. The remains of the ancient stone pueblos of the San Juan and Rio Grande valleys, are also very ancient. It, therefore, appears to the author that, measuring by the evidences of age, it is much more probable that the mound building tribes, who left some traces of Pueblo or Toltec culture, were of Pueblo or Toltec origin, than that they were ancestors of the Toltecs, a theory supported by a number of writers.

* Contributions to American Ethnology (Morgan), Vol. IV, page 202.

† Mr. Gerard Fowke, who has been conducting mound explorations for the Na-

We have seen the busy throng of a hundred or more Italian women and boys with baskets, removing the earth that covered ancient Pompeii. The ashes of Vesuvius, nearly nineteen centuries old, buried the city twenty feet deep; yet about one-half of the entire ruins has been uncovered and laid bare to the eyes of the traveler. Less than a tithe of this vast labor of removal would have erected the largest purely artificial mound in the Mississippi valley.

The highest of the great mounds of America, at Cahokia, Illinois, is but one-fifth of the height of the solid stone pyramid of Gizeh, on the bank of the Nile; and how insignificant does the largest system of native American earth-works appear, when compared with a work of antiquity like the Chinese Wall, built long prior to the Christian era!

tional Bureau of Ethnology in Ross county, Ohio, the center of the Ohio mound district, recently reports the details of his investigations as to its construction as follows: "The mound was raised to the height of fifteen feet, with a diameter of ninety feet. The earth was carried in baskets or skins holding from a peck to two pecks each. Hundreds of little, lens-shaped masses could be traced, where each had thrown his burden; the weight of that thrown by the next comer flattening it out."—See report in Cincinnati Commercial Gazette, July 23, 1883.

CHAPTER III.

THE ANCIENT HOUSES—ABORIGINAL TRADE.

The Houses of the Mound Builders of Tennessee; of Arkansas, Missouri, and Illinois—Their House and Home Life—The Testimony of the Early Writers—The remains of House Sites—The Larger Houses—Mandan Houses—Trowels for Plastering—The Navajo House—Store-houses—Aboriginal Trade—Obsidian—Native Copper—Catlinite—Marine Shells.

The remains of the houses occupied by the mound building tribes of the Mississippi valley indicate that they were probably simple in form, and that they were constructed of perishable material. No tenement or dwelling known to belong to their period, no rude chimney, or house of adobe or brick, or of stone or wood, is left standing among their earth-works, or has been discovered in its original form within the wide area of their territory, to aid us in interpreting their unwritten domestic history. The pueblo tribes of New Mexico and Arizona, who were not in advance of the Stone Grave race in the general scale of civilization, built vast communal houses, indeed fortresses, of sun-dried brick, grouting, and stone, that have withstood the waste of centuries, and in their magnitude, at least, offer an analogy to the great mounds. The ancient Mexicans of the stone age, and their southern neighbors, built imposing mound or pyramid temples, of almost noble architecture, now famous in ruins, but the northern mound builders, living amid different surroundings, so far as we are able to determine, did not erect dwellings very much more substantial than the rude structures of some of the historic Indians.

To the original researches of Lewis H. Morgan we are probably more indebted for our knowledge of house and home life among the aborigines of America than to any other investigator.

The discovery of the immense pueblos in the valleys of the San

Juan and Rio Grande rivers, and the later scientific reports regarding them made by Bandelier and others, interpreting their uses and the social system that existed in them, have also greatly contributed to our knowledge of ancient Indian society, and its family and tribal systems. According to Morgan, aboriginal society in America was organized upon the basis of kinship. The weakness of the single family, and its inability to protect itself in the struggle for existence, led to the union of related families—to “the gens, the phratry, the tribe, and the confederacy of tribes.” It led also to a communal system of living, and necessarily to the erection of joint tenement or apartment dwellings, like the long houses of the Iroquois, the large family houses of the Mandans and other tribes, and the houses of the pueblo communities.* The great pueblo houses, of adobe and stone, have from fifty to five hundred rooms, average from eight hundred to one thousand six hundred feet in circumference, and are sometimes five or six stories high.

Morgan traces this system through all the grades of Indian society, from the lodges of the more savage tribes to the great pueblo or communal house in the ancient city of Mexico, in which Montezuma, as an Aztec chief, gathered about him his relatives and attendants.† A single pueblo structure in New Mexico often housed

* In describing the houses of the Iroquois, Parkman says: “These singular structures were about thirty to thirty-five feet in length, breadth, and height, but many were much larger, and a few were of prodigious length. In some of the villages, there were dwellings two hundred and forty feet long, though in breadth and height they did not much exceed the others.”—*The Jesuits in America*, page xxvi. Champlain says he saw them in 1615 “thirty fathoms long,” and Vanderdonk reports that he saw one from actual measurement five hundred and forty feet long. The houses of the Mandans of the Upper Missouri river were circular in form, about forty feet in diameter, and were divided into separate stalls or apartments. Each lodge would accommodate from five to six families, embracing thirty to forty persons.—*Contributions to Ethnology* (Morgan), Vol. IV, page 126. According to Rev. J. O. Dorsey, of the Bureau of Ethnology, the Dakota word for “gens,” or the family division, came from a word signifying “fire-place,” indicating that the ancient families were counted by the number of fire-places.

† Cortez, in his dispatches to Spain, did not call Montezuma “El Roy,” or king, but “Señor,” or cacique.—*Contributions to Ethnology* (Morgan), Vol. IV, page 223.

the entire population, and constituted a town or village, as the ancient fortified inclosures of Tennessee formed the villages of the mound builders. Some of the houses of the cliff dwellers in the rugged cañons of Colorado also contained more than a hundred different apartments or rooms.

The first stories of the pueblos were without outside doors or openings. The villagers scaled the sides or walls to reach their separate rooms, and lived upon the upper terraces of these structures, which were sometimes five or six stories high. Even chimneys were unknown to them prior to the Spanish conquest, and the smoke from their fires found its way through holes in the roof, after the Indian wigwam style.*

The elaborate systems of earth-works and inclosures in the Ohio valley suggest many analogies to these pueblo structures. The raised embankments afforded a means of defense, and also elevated platforms for dwellings, thus combining the defensive and communal features of the pueblos. Both were similarly located along never failing streams. Within the ramparts of these large Ohio works, which Morgan styles "high bank pueblos," † there was room for stores, fuel, games, and recreation in times of danger, and sometimes for gardens. The lesser works, without the main structures, may have been fortified inclosures for horticulture or other purposes.

The houses of wood and clay, that must have crowned the embankments, have decayed and disappeared; the clay or sun-dried brick probably used by these tribes have crumbled in the moist, frosty climate of Ohio, and left few traces behind. The views presented by Morgan offer the first and only reasonably satisfactory hypothesis as to the probable use of many of these remarkable remains. Morgan regarded them as the works of tribes of Indians of the village or sedentary class—of the same grade as the pueblo

* No chimneys were discovered in the ancient stone houses of Central America, and chimneys as now built were unknown to our European ancestors until about five hundred years ago.

† Contributions to Ethnology (Morgan), Vol. IV, page 210.

tribes of New Mexico. According to Frank Cushing, the original ancient pueblo dwelling was probably a circular wigwam, or "brush hut," somewhat similar to a modern Navajo house or hut. He says the large pueblo structures were probably developed by evolution from these primitive houses by "a sequence of architectural types," the result of the location of weak and scattered tribes in the midst of "an almost waterless area," where stone was abundant, and where they were finally compelled to erect these stone and clay fortress-houses for safety, as the cliff dwellers were forced to build their homes in inaccessible cliffs.* Had some of these natives migrated at an early period from the pueblo districts, near the headwaters of the Arkansas river, in New Mexico, down into the primitive forests of the lower Arkansas, a well-watered, fertile, and heavily-timbered country, or into Tennessee, it seems natural that their new environment would have led to methods of house life, and defensive works different from those adopted in the almost treeless and waterless highlands of New Mexico. Houses of wood and clay, or earth, raised earth-works, and stockade defenses would seem to be the natural outgrowth of these new and different surroundings.

The ancient works of Tennessee were apparently of simple construction, but they indicate the existence of large family dwellings as a characteristic of aboriginal society. Early historical records are also in harmony with this view. From Garcilasso de la Vega we learn that some of the houses in the fortified native towns visited by De Soto were very large. He says "the whole number of houses" (in Mauvila, Alabama) "did not exceed eighty, but they were of size capable of lodging from five to fifteen hundred persons each," a statement probably extravagant, but generally sustained by the other chronicles.†

Joutel, one of La Salle's companions in 1687, tells us that when they visited the village of the Ceniz, west of the Mississippi, "The

* Report Bureau of Ethnology, Vol. IV, pages 473, 481.

† Garcilasso de la Vega, L. III, C. 20; Conquest of Florida (Irving), page 262.

Indian town, with its large thatched lodges, looked like a cluster of gigantic haycocks." He declares that "some of them were sixty feet in diameter." * Joutel's description of one of these dwellings illustrates the house life of the southern Indians at that early period. "These lodges of the Cenís," he says, "often contained eight or ten families. They were made by firmly planting in a circle tall, straight, young trees, such as grew in the swamps. The tops were then bent inward, and lashed together, and the frame thus constructed was thickly covered with thatch, a hole being left at the top for the escape of the smoke. The inmates were ranged around the circumference of the structure, each family in a kind of stall, open in front, but separated from those adjoining by partitions of mats. Here they placed their beds of cane, their painted robes of buffalo and deer skin, their cooking utensils of pottery, and other household goods; and here, too, the head of the family hung his bow, quiver, lance, and shield. There was nothing in common but the fire, which burned in the middle of the lodge, and was never suffered to go out." †

In Iberville's Journal, it is stated that the cabins of the Bayogoulas, a tribe of Louisiana, were circular in form, about thirty feet in diameter, and plastered with clay to the height of a man. ‡ Adair says the winter cabins, or hot houses of the Cherokees, and several other tribes, were circular, and covered six or seven inches thick with tough clay, mixed with grass. Father Gravier, speaking of the Tounicas of Arkansas, says: "Their cabins were round and vaulted. They were lathed with cane, and plastered with mud from bottom to top, within and without, with a good covering of straw." || Tonti, who accompanied La Salle, in 1682, describes his visit to the town of Taensas on the Lower Mississippi. He says the natives had "large square dwellings, built of sun-baked mud, mixed with straw, arched over with a dome-shaped roof of canes,

* La Salle (Parkman), pages 415, 417.

† La Salle (Parkman), page 417.

‡ Prof. Cyrus Thomas, *Magazine of American History*, February, 1884.

|| Early French Voyages (Shea), page 135.

and placed in regular order around an open area. Two of them were larger and better than the rest. One was the lodge of the chief, the other was the temple or house of the sun. The house of the chief was about forty feet square, with no opening but the door. The temple 'where they kept the bones of their departed chiefs,' in construction, was much like the chief's house; a strong mud wall planted with stakes surrounded it. In the middle of the temple was a kind of an altar, before which a 'perpetual fire,' composed of large logs, was burning, and was watched by two old men devoted to their office."* The "temple" in Georgia, described by La Vega, was much larger at the entrance, and inside were large, rude, wooden statues, one twelve feet high. Wooden chests, skillfully wrought, contained "the bodies of the departed caciques and chieftains of Cofachiqui, left to their natural decay, for these edifices were merely used as charnel houses." Annexed to this "mausoleum" were other buildings, which served as "armories," containing weapons, all arranged in order, and maintained with care.†

Turning from these historical accounts to an examination of the traces of the house remains found in the ancient settlements of Tennessee and the neighboring states, we find they verify the statements of the early discoverers.

Prof. F. W. Putnam, of the Peabody Museum, in his report upon the ancient earth-works at Lebanon, Tennessee, says: "Scattered irregularly within the inclosure are nearly one hundred more or less defined circular ridges of earth, which are from a few inches to a little over three feet in height, and of diameters varying from ten to fifty feet. An examination of these numerous low mounds, or, rather, earth-rings (as there could generally be traced a central depression), soon convinced me, that I had before me the remains of the dwellings of the people who had erected the large mound, made the earthen embankment, buried their dead in the stone graves, and

* La Salle (Parkman), page 281.

† Conquest of Florida (Irving), page 231.

lived in this fortified town, as I now feel I have a right to designate it. Nineteen of the best defined of these earth circles were carefully explored, with very gratifying results, and proved to my satisfaction that the ridges were formed by the decay of the walls of a circular dwelling, about which had accumulated, during its occupancy, such materials as would naturally form the sweepings and refuse of a dwelling of a people no further advanced toward civilization than were these mound builders of the Cumberland valley. These houses had probably consisted of a frail circular structure, the decay of which would leave only a slight elevation, the formation of the ridge being assisted by the refuse from the house."

Prof. Putnam states that "the houses of the people were from fifteen to forty feet in diameter, and probably made entirely of poles, covered with mud, mats, or skins, as their decay has left a ring of rich black earth mixed with refuse, consisting of broken bones, broken pottery, etc." *

He also states: "After the recent soil within the ridges had been removed, hard floors were discovered, upon which fires had been made; while in the dirt forming the ridges were found fragments of pottery, broken and perfect implements of stone, several discoidal stones, most of which were made of limestone, bones, teeth, charcoal, etc. On removing the hardened and burned earth forming the floors of the houses, and at a depth of from one and a half to three feet, small stone graves were found in eleven of the nineteen circles that were carefully examined." These were graves of children, and from them "were obtained the best specimens of pottery found within the earth-works, with shell beads, pearls, and polished stones of natural forms, which were probably playthings." †

The house site rings discovered by the author within the fortified works in Sumner county, Tennessee, near Saundersville, were of

* Eleventh Annual Report Peabody Museum, Cambridge, Massachusetts, pages 205, 347.

† Eleventh Annual Report Peabody Museum, page 351.

the same general character, averaging from twenty to forty feet in diameter, and having burned clay fire hearths in the center.

The agents of the Smithsonian Institution, who have explored the earth-works of Arkansas, Missouri, and sections of Illinois, have made similar reports as to the character of the dwellings occupied by the tribes of pottery makers of these districts. Prof. Thomas states that "in numerous instances, probably hundreds, beds of hard burned clay, containing impressions of grass and cane, were observed; these were generally found one or two feet below the surface of the low flat mounds, from one to five feet high, and from fifteen to fifty feet in diameter, though by no means confined to mounds of this character, as they were also observed near the surface of the large flat topped and conical mounds."

So common were these burned clay beds in the low, flat mounds, and so evidently the remains of former houses, that the explorers generally speak of them in their reports as "house sites." *

These evidences of the character of the dwellings of the Stone Grave race, and their pottery making kindred of the Central Mississippi district, might be multiplied indefinitely, but they are sufficient to show the methods of their construction, and that they

* Magazine of American History (Prof. Cyrus Thomas), February, 1884. Prof. W. B. Potter, of the St. Louis Academy of Science, who explored a large number of mounds in South-east Missouri, found inclosures similar to those found in Middle Tennessee, with the large central mounds of about the same size, and thus refers to the house sites: "A marked feature of all the inclosed groups of mounds found in South-east Missouri is the occurrence of a large number of circular depressions, which seem to mark the sites of huts or dwelling-places. The average depth of these depressions is about two feet, and the diameter thirty feet. The centers are fifty to sixty feet apart. There is no systematic arrangement or grouping of the depressions. In the center, and occasionally at one side, of these depressions, there can be found, at a depth of about fifteen inches below the present surface, a square of burned or partially burned clay, about thirty inches by twenty-five inches. The clay was evidently placed there designedly, for it is entirely different from the sandy clay or loam which occurs elsewhere throughout the settlements. Small pieces of charcoal and fragments of bone have been obtained from these hearths."—Archæology of Missouri (Potter), page 10.

were necessarily built of wood or other perishable materials, and could not have been very much more elaborate or substantial than the dwellings of the Indians known to history. We have also some valuable information from archæological sources as to the larger or public houses of the mound building tribes, and confirming the historical accounts of their erection upon the mounds.*

Doubtless, systematic explorations will reveal further facts regarding them.

* Colonel Morris, an agent of the Bureau of Ethnology, some time since explored a group of earth-works in Butler county, Missouri, consisting of "an inclosing wall and ditch, two large outer excavations, and four inside mounds." The largest mound had an average diameter of about one hundred and thirty-five feet, and was twenty feet high. Deeply imbedded within the central portions of the mound were found two large upright charred posts, near the charred and decaying remains of horizontal or cross timbers, and in connection with burned clay, ashes, charcoal, and charred bones, indicating almost certainly the remains of a large house structure, built upon or in connection with this mound, or upon the smaller mound, upon which the main mound appears to have been subsequently erected. Within the different strata or layers of the mound were the remains of nine large fire-beds, indicating altars, sacrifices, burial ceremonies, or, possibly, merely the fire-hearths used at different periods of occupation.—*Magazine of American History* (Thomas), February, 1884. Gerard Fowke, an assistant of the Bureau of Ethnology, also reports that recently, in exploring a large mound on the Scioto river, in Ross county, Ohio, he discovered the remains of wooden "posts set in pairs around the edge; other posts at intervals within assisted" (or may have assisted) "in holding up the roof. The interior space was nearly forty feet across. A streak an inch thick of mingled ashes, charcoal, and black earth, spread over the floor, indicated the usual untidy appearance of the aboriginal housekeeping." The skeleton remains of an elaborate burial were inclosed in the mounds, and appearances indicated that the house had been torn away or burned, and the mound subsequently increased in size over the remains.—Gerard Fowke's Report, in the *Cincinnati Commercial Gazette*, July 23, 1888. In 1876, Prof. Carr, of the Peabody Museum, in exploring a large mound in Lee county, Virginia, discovered a series of decaying cedar posts, imbedded in a circle around the top of the mound, which the intelligent explorer regarded as the remains of a large house structure similar to the council-house Adair saw on a mound in the old Cherokee town of Cowe, Georgia, in 1773.—*Tenth Annual Report Peabody Museum*, page 75. Prof. Putnam also found an upright cedar post still standing deeply planted in the large ancient mound of the Lebanon group, in Tennessee.

Researches among the remains of the ordinary dwellings—the dirt or clay floors invariably found; their width and generally circular form, the fire beds in the center; the traces of perishable materials used in their construction; the irregular manner in which they were scattered within the fortified inclosures—all seem to identify them as of the same general character as some of the houses and huts of the natives described by the Spanish and French discoverers.*

We have, unfortunately, from historic sources, few illustrations of the better class of Indian houses of the early frontier. A ground plan and cross section of one of the typical dwellings of the Mandan Indians of the Upper Missouri country (Figs. 11 and 12), will show a method of house construction employed by that tribe, by which homes of considerable comfort were provided.

They doubtless differed materially from the clay-plastered dwellings occupied by some of the advanced tribes of southern Indians; yet, after centuries of abandonment and decay, such habitations would have left remains, not unlike some of the house site remains now found within the ancient earth-works of Tennessee.

The illustrations explain themselves sufficiently for our purpose, and show the circular forms, the upright timbers, and the fire pits or hearths in the center of these houses.

They were about forty feet in diameter, and were scattered irregularly within the fortified village sites, like the circular house floors found within the works at Lebanon and Saundersville.

No traces or remains of a more advanced system of house construction than that observed by the early explorers have been found within the mound or embankment works of Tennessee or elsewhere within the mound area, yet, under the floors and about these primitive homes, and within the adjacent cemeteries of the Stone Grave race, have been found many of the most elaborately wrought implements, vessels of pottery, and ornaments of stone and shell, yet discovered

* The Huron Iroquois town covered a space of from one to ten acres, "the dwellings clustering together with little or no pretension to order."—*The Jesuits* (Parkman), page xxvi.

within the Mississippi valley, showing that the ancient townspeople and villagers who lived in these primitive dwellings of Middle Tennessee had reached a state of development not inferior to that of the mound tribes of Ohio or the most advanced Indian tribes of the pueblos of New Mexico and Arizona.

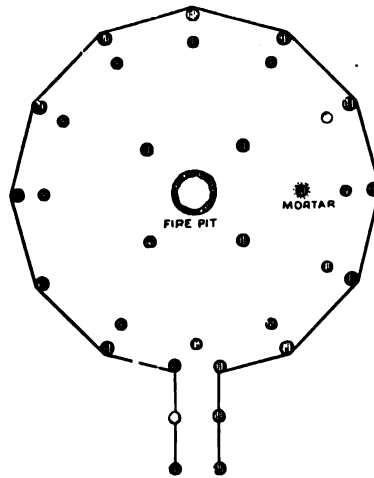


FIG. 11.—GROUND PLAN OF MANDAN HOUSE.*

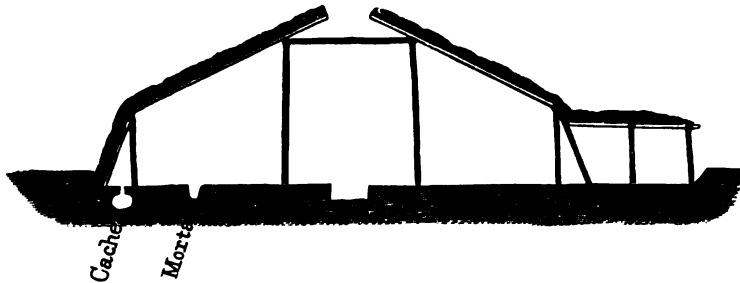


FIG. 12.—CROSS SECTION.*

The remains of art and industry indicate that the dwellings, although simple in form, and of comparatively temporary character, must have been constructed with considerable care, and were doubtless sufficiently substantial to securely house their various

* From Smithsonian Contributions to Ethnology (Morgan), Vol. IV, pages 126, 127.

articles of domestic use, some of which were delicate and costly. The earthen floors, we find, were sometimes covered with mats, after the historic style. The adobe or clay-plastered walls of the Arkansas tribes were also often ornamented with molded work of reeded patterns, and even painted, as we know from the clay remains found on the circular house floors, and now preserved in the National Museum at Washington.

Since this chapter was originally written, a discovery was made by one of the writer's assistants (in January, 1890), in exploring the large aboriginal cemetery, near Nashville, that throws considerable light upon the ancient houses. In a single grave were found five

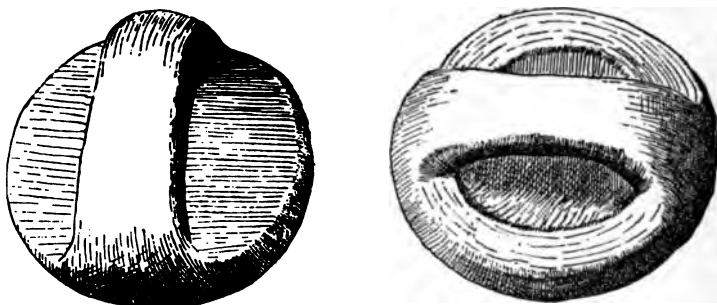


FIG. 13.—PLASTERING TROWELS (ONE-FOURTH), NOEL CEMETERY, NASHVILLE.*

implements of well burned clay, which we are satisfied were used as *plastering trowels*. They were evidently the outfit or set of tools of an aboriginal plasterer of the old city upon Brown's creek. The two largest of these trowels, measuring about six inches in diameter, are illustrated in Fig. 13.

The flat smoothing surfaces, circular in form, are burned nearly as hard as stone, as if made to stand hard usage. The three smaller trowels of the set, four or five inches in diameter, are oblong in form, and have similar handles. All show evidences of use, and are somewhat worn. Indeed, a very thin polished outside coating of clay may still be seen upon three of them, indicating very clearly that they were used in smoothing some clay surface or wall.

* Author's collection.

The different sizes were probably suitable for finishing the various kinds of plastering work. Some of the smaller ones may have been used in making the large vessels of pottery. The subject of pottery and plastering trowels will be considered in the chapter upon implements of pottery, where other illustrations of these objects will be presented.

This set of plastering tools is a most interesting and suggestive discovery. No one would have gone to the trouble of procuring or making these fine trowels to plaster a single residence. They must have been the tools of some artisan engaged in this occupation, and they were probably placed, with his other worldly treasures, in the grave in which he was buried, after the aboriginal custom. Such objects would not have been placed there as a tribute of affection or esteem. They indicate that in the prehistoric period, men *followed the business of plastering*, and that some of the adobe or clay plastered houses were plastered with care by skillful workmen, and were probably of a better character than has been generally supposed, and better also than we have represented them.

Fine clay abounded throughout this section, and there is no reason to believe that such mechanics were less skillful in their work upon the houses of the stone grave settlements than were the pottery makers of the same tribe, who made the fine vessels of earthenware. The houses were probably made of adobe or grouting, in part, as were some of the houses of the pueblo tribes. Unoccupied and uncared for, they could not long have withstood the moist atmosphere of Tennessee. A single century, with the aid of fire and frost, would have been more than sufficient to destroy them, and leave to the archæologist only the "house site" remains now found.

Doubtless many of the implements, ornaments, and utensils, showing evidences of some refinement, were made and used in these clay plastered dwellings.

Among the historic Indians, it is not unusual to find varieties of good ware and well-wrought implements and fabrics manufactured in rude dwellings and amid wild surroundings. The Navajos of New Mexico and Arizona live in common lodges or huts, made

of rough logs, and thatched, or covered with earth. Like the houses of the mound building tribes of Tennessee, their houses are circular in form, and from twenty to fifty feet in diameter. According to Frank Cushing, the remains of their ancient dwellings show that they were also circular in form. The sketch of a modern Navajo hut (Fig. 14), will show its rude and primitive construction.

Yet the Navajos make beautiful and finely woven blankets, with home-made dyes and of rich and varied designs, in these com-



FIG. 14.—A NAVAJO DWELLING.*

mon dwellings and in the open air, under the neighboring trees. Of late years, they have also become expert silversmiths, and, with the aid of rude forges, they manufacture jewelry that would be a credit to civilized artisans. They make fine basket and feather work, and excel in several of the arts and industries of domestic life.† Some

* From Report Bureau of Ethnology (Powell), Vol. IV, page 473.

† The Navajos and Pimas of the village Indian class are similar in many of their habits and characteristics to the mound tribes of the Mississippi valley. They tattoo their faces; they made pottery ware sometimes representing animal forms; they used stone implements not unlike those of the Stone Grave race; they cultivated maize and beans and tobacco, and were a docile and progressive tribe.

of the Indian tribes of the north-west coast of America, that live in rude huts, excel all other native tribes north of Mexico, in artistic carvings in wood and stone.

It seems that there were, probably, general storehouses, in the prehistoric period, in the larger towns of the Mississippi valley.

We are told by the "Portugese Narrative," that, at the date of De Soto's expedition, some of the towns visited contained "store-houses" filled with rich and comfortable clothing, such as mantles of hemp and feathers of every color, exquisitely arranged, forming admirable cloaks for winter, with a variety of dressed deer-skin garments, and skins of the marten, bear, and panther nicely packed away in blankets.*

The extent of aboriginal trade, and of the interchange of commodities among the natives of the Mississippi valley, can scarcely be realized without some investigation. Among the remains discovered in the ancient cemeteries near Nashville, as heretofore stated, were many articles showing intercourse or commercial relations with the tribes of distant sections. Objects of native copper from the shores of Lake Superior, ornamented sea shells from the gulf and south Atlantic coast, finely wrought articles of cannel coal, and implements of polished hematite from distant mines, and of quartz, steatite, syenite, and slate were found.

That obsidian or volcanic glass, copper, and catlinite, originally found only in special known localities, should be unearthed thousands of miles from their native beds, and often in considerable quantities, has been a matter of surprise, even to archæologists, and indicates the very great extent of ancient intertribal communication.

* Historical Collections of Louisiana, Part II, page 172; History of Alabama (Pickett), Vol. I, page 55. "There were found in the town many mantles and deer-skins, lion-skins, and bear-skins, and many cat-skins; many came so far poorly appareled, and there they clothed themselves. Of the mantles they made them coats and cassocks, and some made gowns, and lined them with cat-skins, and likewise their cassocks. Of the deer-skins some made them also jerkins, shirts, hose, and shoes; and of the bear-skins they made them very good cloaks."—Portugese Narrative, page 711.

Obsidian *in situ* is not found east of Mexico or Colorado, yet Dr. Troost, the former learned geologist of Tennessee, and Dr. Joseph Jones, both report its discovery in Tennessee.*

Copper in its native state, suitable for hammering into implements or ornaments, is found *in situ* in the upper peninsula of Michigan, along the borders of Lake Superior. It has not been discovered elsewhere in this form south of this general district, excepting in very small quantities in one or two localities. The ancient copper pits or mines along the southern shore of the lake, worked by aboriginal miners, have frequently been described.†

It is a remarkable indication of the far-reaching extent of aboriginal trade, that native copper, necessarily from these northern mines, has been found in nearly every section of the country, east of the Rocky Mountains, including the Gulf states. It is discovered in the mounds and graves, and elsewhere, in the form of implements, ornaments, knives, spear-heads, and other objects.

A number of interesting articles of native copper found in Tennessee will be described in subsequent chapters.

The widely spread use of catlinite also indicates the extent of aboriginal trade. The identity of its original location is more marked than that of native copper. This beautiful and easily worked red pipe stone is only found *in situ* in the ancient quarries of the "Coteau des Prairies" on the western border of Minnesota. Carver, who visited the Upper Mississippi region, in 1766-68, marked it on his maps as the "Country of Peace," because all the tribes met there in peace to obtain pipe stone,‡ an illustration of the reasonable and gentle side of the Indian character ex-

* Troost's "Ancient Remains in Tennessee," in Transactions of the American Ethnological Society, Vol. I, page 361; Aboriginal Remains (Jones), page 76. Squier and Davis found obsidian arrow points and fragments in five ancient mounds in the Scioto valley, in Ohio. Ancient Monuments of the Mississippi Valley, page 306. It has also been discovered in Mississippi and Wisconsin.

† The writer visited these mines years ago, and discovered a grooved stone ax, used by the natives in their mining work.

‡ Carver's Travels, page 78.

quisitely pictured by Longfellow in his "Song of Hiawatha."
There the Great Spirit—

"Smoked the calumet, the Peace pipe,
As a signal to the nations,"

to come as brothers from near and far to this famous neutral ground,
bury their feuds and hatreds, and quarry the pipes of peace.*

Catlinite pipes must have been used by most of the ancient and modern tribes. The Delawares, Iroquois, and New England Indians, far to the east, used them. They have been found in the mounds of Ohio and Illinois.

The catlinite pipe found in a stone grave in the Noel cemetery, near Nashville, and now in the author's collection, is a typical specimen of prehistoric art. It offers positive proof of ancient relations or intercourse with the tribes of the far North-west, the ancient home of the Mandan and Dakota Indians.† There is no difficulty in identifying the well-known clay stone of which this pipe is made. It is only found in the locality mentioned, and is familiar to all collectors.‡

The extent of intercourse and traffic among the ancient tribes is also well illustrated by the widely distributed marine shells found in the prehistoric cemeteries of Tennessee. Vast stores of them are discovered, in an unusual variety of forms. Whether from their fortunate preservation in the stone graves, or from their more recent

* The poet Longfellow says they came—

"From the vale of Tawasentha,
From the valley of Wyoming,
From the groves of *Tuscalusa*,
From the far off Rocky Mountains,
From the Northern lakes and rivers;
All the tribes beheld the signal,
Saw the distant smoke ascending,
The Pukwana of the Peace Pipe."

† Some authorities have suggested that the Mandans were part of the mound building tribes.

‡ The catlinite pipe is illustrated in a subsequent chap

date of deposit, no other state can compare with Tennessee in the number and beauty of the shell ornaments and utensils found among its ancient remains. Beads, pendants, gorgets engraved and plain, pins, ear-rings, implements, cups, and spoons, are found in great numbers, a large proportion of which must have come from the distant Atlantic or gulf coasts, showing not only intercourse with the coast tribes, but intimate and extensive trade relations with them.*

There is also ample *historical* evidence of intertribal traffic at a very early period. After the failure of Narvaez's expedition into Florida, in 1528, Cabeza de Vaca, who was left behind, found little difficulty in supporting himself as a trader or peddler in his long circuitous journey from Florida to Mexico. He reports that he gathered and exchanged the wares of the country and the coast flints, skins, mineral paint, medicine, conch-shells, sea-beans, and other merchandise.†

De Soto found the natives at the Saline Springs of Tulla, Arkansas, making salt, which was "made into small cakes, and vended among the other tribes for skins and mantles." ‡

La Salle, Marquette, Hennepin, and Charlevoix traveled long distances through the interior of the Indian country with little or no other protection or introduction than the calumet or pipe of peace. The natives were a trading people, and as De Vaca says, he always received fair treatment, out of regard for "his commodities." From the many identities, and marked resemblances found in the images and pottery forms of Arkansas, Missouri, and Tennessee, there is but little doubt that the native traders came from the ancient focus of this pottery district on the Mississippi,

* In illustration of Indian exchanges, Schoolcraft says, "he saw, at the foot of Lake Superior, Indian articles ornamented with the shining white *Dentalium eliphaeticum*, from the mouth of the Columbia river."—*Ancient Monuments* (Squier and Davis), page 254.

† Relation of Cabeza de Vaca, translated by Buckingham Smith, page 85, et seq. New York, 1871.

‡ History of Alabama (Pickett). Vol. I, page 70.

near the mouth of the Ohio river, with canoes laden with wares, up the Cumberland, Tennessee, and Ohio rivers. Perhaps the aristocratic ancient town near Nashville, whose remains have recently been unearthed, was a colony from this main center. Like some of the Greek colonies that settled in Italy, it surpassed the parent stock in some of its manifestations of art.

Father Membré, in 1681, saw a fleet of one hundred and fifty canoes at one of the towns on the Mississippi river. Some of them were forty to fifty feet long.*

De Soto met a fleet of two hundred pirogues or large canoes, manned by the natives, on discovering the Mississippi. "It was a pleasing sight," says the Portuguese narrator, "to behold these wild savages in their canoes, which were neatly made, and of great size, and with their awnings, colored feathers, and waving standards, appeared like a fleet of galleys."† Armed Indians, carrying shields made of buffalo hides, sheltered the rowers, while others stood in battle array with their bows and arrows.

That these native fleets could assemble upon the Mississippi, almost without warning, is an indication of the ease with which the ancient tribes were able to traverse the great rivers, and communicate with distant sections, either in their wars or peaceful exchanges. Bands of Iroquois from central New York came all the way down the tributaries of the Ohio in their light canoes, and up the winding Cumberland, to enjoy the pleasure of pillaging and burning the houses of the less warlike Shawnees near Nashville. They sometimes pursued the Cherokees and Chickasaws to the banks of the Tennessee river. They came west with La Salle, and drove the Illinois tribes beyond the Mississippi.

Carver, more than a hundred years ago, learned from the Winnebagos, of Wisconsin, that their war parties sometimes traveled as far to the south-west as New Mexico, "the land of the Spaniards," and that it required months to make the journey.‡ Similar excur-

* Discovery of the Mississippi (Narrative of Father Membré), page 181.

† Portuguese Narrative, C. 22; Conquest of Florida (Irving), page 314.

‡ Carver's Travels, New York, 1838, page 42. Du Pratz mentions the fact that

sions or migrations were doubtless not uncommon in the prehistoric period.

Pipes, flints, axes, and ornaments of stone are rarely found near their original beds. Beautiful pipes, wrought out of steatite, porphyry and serpentine from East Tennessee and North Carolina, found their way far down the Mississippi into Louisiana, and into the shell heaps of Florida and Alabama. Three pipes, of the well defined north-west coast forms, have been unearthed in New England. Plates of mica, from North Carolina and Virginia, are found in great abundance in the mounds and graves of the Mississippi valley. To understand the ethnic status of the prehistoric tribes, therefore, and to clearly comprehend ancient life in Tennessee, these widely extended relations should be fully realized. The aborigines were evidently a trading, traveling, warring, and migrating race.

We are told by Hubert Bancroft that the ancient Mexican traders made long journeys to distant sections, occupying months of time, and we have no good reason for supposing that either the Toltecs, the Aztecs, or the pueblo tribes were wholly ignorant of the vast population inhabiting the Mississippi valley, especially as the remains found occasionally exhibit traces of Mexican and pueblo culture.*

one of the Yazoo Indians of Mississippi (Montcacht-apé), in one of his journeys to the Far West, reached the Pacific coast, and returned to his tribe in Mississippi after an absence of five years.—History of Louisiana, Vol. II, page 128. London, 1763.

* Herrera, the Spanish historian, describes the cargo of a large trading canoe that came from Yucatan, at the time of Columbus, to one of the islands in the gulf, "forty leagues" distant from the mainland; showing how easily Cuba and Florida could be reached by the natives of Central and South America.

CHAPTER IV.

INSCRIBED STONES, IMAGES, IDOLS, CRANIA.

Ancient Inscribed Stones Found in Tennessee—The Sumner County Pictograph—The Riggs Face Bowl—Images of Clay—Stone Idols—The Troost Idol The Cradle Board Image—Crania from the Graves of Tennessee—Ancient Crania from Missouri—Peruvian Skulls—Pueblo and Cliff Dwellers' Skulls—Tables of Measurement.

One of the surest indications that the state of ancient society in the Mississippi valley was essentially rude and primitive is found in the fact that few prehistoric inscriptions of archæological value, or picture writings of interest, have been discovered within this widely extended area. None have been found approaching the higher grades of hieroglyphic writings, such as marked the civilization of the Mayas of Central America, or even equaling the ruder Runic characters or alphabet of the ancient Northmen.

The North American Indians excelled all other barbarous tribes in the efficient and general use of sign language, and in expressing conceits, recording events, and conveying information by rude markings or inscriptions; yet the antiquarian will search in vain among the pictographs and inscriptions that illustrate the large volumes of Squier and Davis, Catlin, Schoolcraft, or the more recent valuable publications of the Bureau of Ethnology* for traces of an ancient native written language, or decipherable symbol language. The large number of pictographs and inscriptions illustrated are rarely above the grade of the rude archaic animal sketches and markings, or rock carvings, of the historic tribes, and are of comparatively little ethnic value. A few inscriptions or

* In the Fourth Report of the Bureau of Ethnology (Powell), page 13, will be found a long and valuable illustrated paper by Colonel Garrick Mallery upon the pictographs of the North American Indians.

pictures of a higher type have been discovered. The Cincinnati tablet,* the figures on copper from the Etowah mound in Georgia, and several of the engraved shell figures and pictures from the mounds of Tennessee, Georgia, and Missouri, are objects of much archæological interest, and must be excepted from the mass of ruder prehistoric pictographs. Although these expressions of art are essentially Indian and primitive, they point to a state of society, or of local or individual development, in certain ancient centers of population, a degree above the general culture status of the historic tribes. This proof is positive, and must be accepted. These evidences of ancient culture could not all have been borrowed or exotic. They do not indicate a state of society beyond the reach of the ancestors of the historic tribes in the natural progress of development, nor are they above the general state of art and culture of progressive tribes like some of the advanced pueblo villagers. They merely mark the highest points or stages of culture probably reached in the slow processes of evolution, and suggest that there has been a slight decadence since the dawn of history, or the best prehistoric period, probably resulting from wars, migrations, or other natural causes. Illustrations of some of these interesting objects will be found in subsequent chapters. A few ancient carvings or inscriptions upon stone of considerable interest have in recent years been found in Tennessee.

The carefully engraved stone, both sides of which are fairly well illustrated in Fig. 15, was found some years ago near Petersburg, in Lincoln county, Middle Tennessee, and is now in the collection of the Tennessee Historical Society. The stone is of dark, hard, and compact slate. It is a little larger than the illustration, and bears such marks of age and use that there can be no question

* We are aware that the genuineness of this tablet has been questioned. We have carefully examined the original and investigated its history, and also that of the two ruder Ohio tablets of somewhat similar character. We have known Mr. Gest, the owner of the Cincinnati tablet, many years, and we see no good grounds to doubt that it is a genuine prehistoric relic.

as to its genuineness.* The ornamentation engraved upon it is of the familiar Greek key or classic fret pattern, frequently found



FIG. 15.—ORNAMENTED "BANNER STONE" (LINCOLN COUNTY, TENNESSEE).

among Mexican antiquities. The same pattern, in more regular forms, ornaments the front of the ancient "Governor's House," at



FIG. 16.—A VESSEL OF POTTERY FROM THE MOQUI PUEBLO.

Uxmal, in Central America. More exact examples of the ornamentation upon this stone are, however, to be found upon the an-

* It was presented to the Tennessee Historical Society, in 1883, by Mr. R. A. Parks, an intelligent and reliable gentleman of Lynchburg, Tennessee. He writes that, "it was found in the sand on the bank of a small stream in Lincoln county, near Petersburg, by the children of the Marshall family."

cient pottery from the Moqui pueblos in the province of Tusayan, Arizona. The handsome old Moqui vase (Fig. 16) is ornamented in patterns almost duplicating the lines engraved upon this stone. It may be found in the collection of the National Museum, with many other articles of pottery of similar ornamentation from the same province.*

A fine specimen of a higher type of this form of ornamentation is presented in Fig. 17. It was taken from a fragment of very ancient pottery found in Mexico, and shows the more advanced culture of the Aztecs or Toltecs.† This rare little engraved "banner stone" was doubtless long worn or carried as an ornament, token,



FIG. 17.—A FRAGMENT OF ANCIENT MEXICAN POTTERY.

or amulet, or, perhaps, was used for some ceremonial purpose. It may have been a long-treasured keepsake of the Fatherland in the Far West, as it was probably an importation, centuries ago, from the Moqui pueblo section. No similar tracery or ornamentation has been discovered among the antiquities of Tennessee, or of the Mississippi valley, so far as we can learn. It establishes with considerable certainty the existence of intercourse between the ancient inhabitants of Middle Tennessee and the tribes of the pueblos, evidently village Indians of the same general class.

An inscribed stone of an interesting character was recently

* See the larger illustration of this vase and others in Reports Bureau of Ethnology, Vol. IV, pages 320-336.

† The illustration is copied from Prehistoric Man (Wilson), Vol. II, page 30.

found by George Wood, a colored man, while "digging for pots" in the large aboriginal cemetery on the Noel farm, near Nashville. The stone is a sandstone, yellowish-gray in color, and of rather coarse grain. It is about two inches in diameter, and nearly an inch thick. On the reverse side, it is hollowed out like a "cup stone." An engraving of it, representing both sides, is shown in Fig. 18.

The inscription, well and deeply cut into the hard stone, is evidently ideographic, and a painstaking attempt at hieroglyphic or sign writing. It was certainly intended to have some special signif-

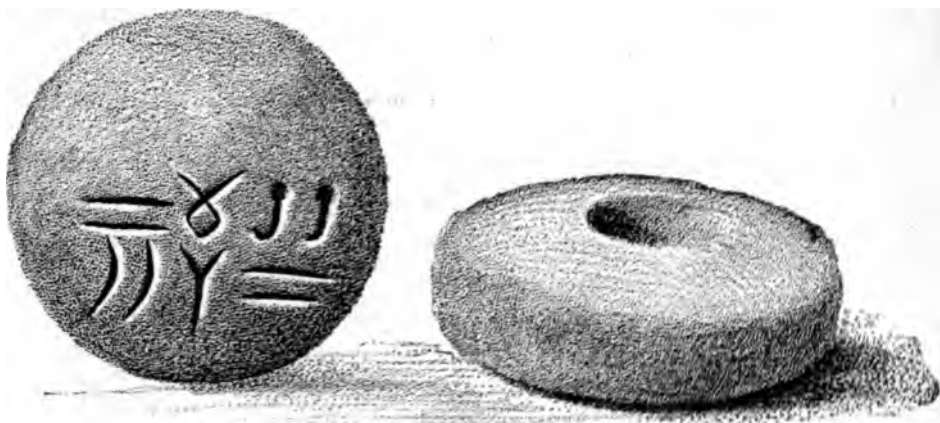


FIG. 18.—INSCRIBED STONE FOUND NEAR NASHVILLE.*

icance, or to record some specific idea, as the characters are not careless incisions or markings. It may have represented some contract, or totem, or memorial, or some money idea, or value.

The characters happen to be somewhat similar to some of the letters of the old Phœnician alphabet, and to the Runic inscriptions of the ancient Scandinavians. Dr. M. W. Dickinson, in his valuable work upon American Numismatics, gives a number of illustra-

* Author's collection. The unevenness of the surface rendered it impracticable to present a photo-engraving directly from a photograph of the stone; but no one, upon examining it, will doubt the genuineness of this antique. We obtained it from the workman the day it was found, and washed away the clay adhering to it.

tions of small, inscribed disks of stone, clay, coal, and galena, in form somewhat like this inscribed stone, objects discovered by him in exploring the mounds of the lower Mississippi valley, and which he designates as "aboriginal money" of the mound building tribes.* A few small disks of the same kind have been found in Tennessee. Dr. Dickinson was excellent authority upon this general subject, but we do not find it considered elsewhere, and we can not be certain that these little "discoidals" were used as money.

The prehistoric tribes probably had no medium of exchange corresponding with our modern idea of money or currency. Even the Aztecs of ancient Mexico had no regular metallic currency in general use. Barter and interchange of commodities constituted their principal method of exchange. The nearest approach to a system of currency among the historic tribes, was the use of wampum or shell money, a use doubtless originally derived from the value of shells or shell beads as ornaments. The unique stone illustrated, however, is of interest as indicating an effort at sign writing much above the ordinary types of Indian inscriptions.

Some of the North American Indians, so expert in conveying their ideas by signs and sign writing, were evidently making slow but certain progress toward a written alphabet.

There has also been discovered, in Sumner county, Tennessee, near the stone graves and mounds of Castalian Springs, a valuable pictograph, the ancient engraved stone illustrated in Plate II, which we have taken the liberty to entitle A Group of Tennessee Mound Builders.

This engraved stone, the property of the Tennessee Historical Society, is a flat, irregular slab of hard limestone, about nineteen inches long, and fifteen inches wide. It bears every evidence of very great age. A plate engraved directly from a photograph of it would have been made for this publication, but the surface of the stone was uneven, and it was found impossible to get a strong pho-

. * Dickinson's American Numismatics, page 37.

PLATE II.—A group of Mound Builders.





tograph of the whole picture for a single plate. The stone was found on Rocky creek, in Sumner county, and was presented, with other relics, to the Tennessee Historical Society about twelve years ago. The society, at that time, not having sufficient room to exhibit its collections, the stone was packed away until 1886, when it was placed on exhibition at the new "Historical Rooms," in the Watkins Institute, in Nashville. No archæologist, upon examining it, will doubt that this interesting pictograph in stone is a genuine antique.

It is evidently an ideograph of significance, graven with a steady and skillful hand, for a specific purpose, and probably records or commemorates some important treaty or public or tribal event. It seems to represent a time of general congratulations, perhaps some aboriginal Fourth of July! Indian chiefs, fully equipped with the insignia of office, are arrayed in fine apparel. Two leading characters are vigorously shaking hands in a confirmatory way. The banner or shield, ornamented with the double serpent emblem and other symbols, is, doubtless, an important feature of the occasion. Among the historic Indians, no treaty was made without the presence or presentation of the belt of wampum. This, the well-dressed female of the group appears to grasp in her hand, perhaps as a pledge of the contract. The dressing of the hair, the remarkable scalloped skirts, the implements used, the waist-bands, the wristlets, the garters, the Indian leggins and moccasins, the necklace and breast-plates, the two banners, the serpent emblem, the tattoo stripes, the ancient pipe—all invest this pictograph with unusual interest.

Mr. Conant, in his *Footprints of Vanished Races*, published in 1879 (page 94), referring to the mound builders of South-east Missouri, makes the following statement: "In some of their human effigies do we find the manner of arranging their hair distinctly delineated, and we may yet discover those which shall furnish us with correct representations of their mode of dress. Indeed, I have seen one vessel with figures of men rudely painted in outline upon its sides, *who were clad in flowing garments gathered*

by a belt around the waist and reaching to the knees." (The italics are used to call attention to the latter part of the statement.)

Mr. Conant's prediction is fully realized in this pictograph. Here are portrayed, evidently with considerable correctness, the dresses and figures of leading personages of the Stone Grave race, the mound builders of Tennessee, as they appeared upon some important occasion. Unfortunately, the faces of two of the four upper figures, the fanciful hair or head ornaments, the lower shield and some other details are partly lost by the disintegration of the stone, owing to its great age. Only faint outlines can now be seen. It would probably have been wiser to have made no attempt to illustrate these portions of the pictograph. The implements or objects in the hands of the separate figure below have also become somewhat obscure, but the pictograph, as it now appears, has been copied from the original stone, with truthful expression and exactness of details. It was well and deeply graven, probably with some implement of quartz or flint upon the softer limestone surface. The aboriginal art was even slightly superior to the art of the copyist, as represented in the illustration presented. Some slight analogies or resemblances to the figures in this pictograph are found in other prehistoric picture writings from the mounds.

In the figures on copper from the Etowah mound of Georgia, illustrated in the Fifth Annual Report of the Bureau of Ethnology, and in the two fine shell gorgets in the same report, the waistbands and garters invariably appear, and there are traces of the pointed fashion of the skirts. The back hair-knot is frequently observed on the pottery heads, and shell gorgets from the stone graves, and may be seen elegantly arrayed in the Etowah plate figures. The rude head in clay (Fig. 19) found within the ancient earth-works, near Hickman, Tennessee, offers an illustration of two of the long and peculiarly formed back hair-knots in the stone picture.*

Judge Haywood, in describing a large stone idol found in

* This illustration is from *Aboriginal Remains of Tennessee* (Dr. Jones), page 63.

Wilson county, Tennessee, says: "On the back of the head is a large projection, so shaped as to show, perhaps, the manner of tying and wearing the hair." *

Fanciful head-dresses were worn by all Indians upon occasions of ceremony, from the eagle plumes of the wilder tribes to the elaborate feather crowns of the Aztec chiefs.

One of the branches of the Cherokee tribe was named the family of the "Long Hair." This was the badge or totem of the clan.† Bartram reports that the women among the southern Indians "made diadems"‡ for the men's heads, and Parkman tells us that the northern tribes "wore their hair after a variety of gro-



FIG. 19.—POTTERY HEAD, WITH LONG HAIR KNOT.

tesque and startling fashions,"|| a statement that might be justly applied to some of the fashionable head-dresses of more civilized races.§

The neatly dressed female in the picture seems content with a chignon of modern style. Her prominence upon this public occasion, and the fact that she seems to have possession of the belt of wampum, are both indications of progress in the direction of civili-

* Natural and Aboriginal History of Tennessee, page 438.

† Ancient Society (Morgan), page 164.

‡ Bartram's Travels, page 511. London, 1792.

|| The Jesuits, page xxxiii.

§ "Tufts of deer's hair, dyed of scarlet color, were worn as head-dresses."—Relation of Cabeza de Vaca, page 121. Paris, 1837.

zation. De Soto found "the beautiful young Indian princess, Xualla," ruling over the province of Cofacheque, on the Savannah river.* The tattoo marks on the faces of two of the chief figures are significant. We find, from a series of rude drawings or "counts" of the Dakota Indians, illustrating the fourth annual report of the Bureau of Ethnology (page 174), that the principal chiefs of the Dakotas were marked by *three tattoo lines* of paint across their cheeks; and that, in the Indian picture writings, the holding of a war club or pipe was a sign of authority, and indicated

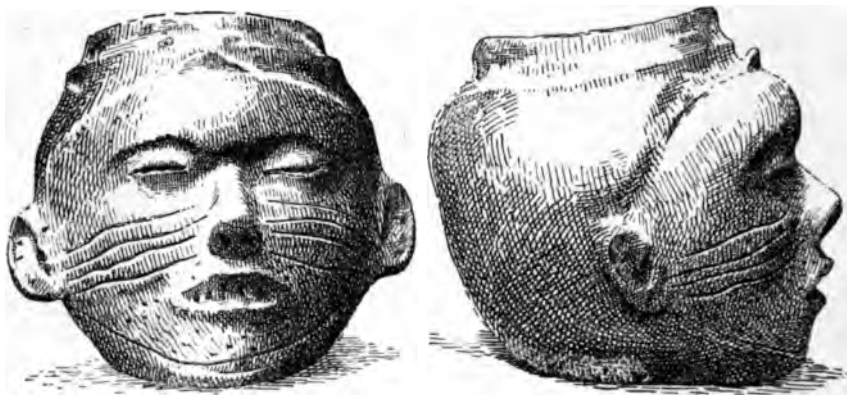


FIG. 20.—THE RIGGS FACE BOWL (ONE-THIRD).

that these special chiefs had at some time led independent war parties.†

According to the interesting pictograph presented, the chiefs among the mound builders of Tennessee had *four* lines of paint, or tattoo marks, on their faces upon occasions of ceremony. The prevalence of this custom among the pottery makers of Tennessee and Arkansas may also be established by testimony, independently of the pictured stone.

* Conquest of Florida (Irving), page 219.

† Pictographs of the North American Indians (Colonel Garrick Mallery), page 175. The Mandans, who have been mentioned by several writers as probable descendants of some of the mound building tribes, are a branch of the Dakota or Sioux tribe of Indians.

One of the finest, if not the finest, face or portrait bowl yet discovered among the mound graves of Arkansas, and well illustrated in Fig. 20, as will be observed, is strongly marked with the *four* tattoo lines upon its face, thus confirming the story of the interesting pictograph from Sumner county. This terra cotta bowl was recently discovered in or near a mound on the St. Francis river, in Arkansas, near the mouth of the Tyronza river, by Mr. C. W. Riggs, an enthusiastic mound explorer, who kindly furnished us with excellent photographs of it, from which, with the aid of sketches from the original bowl, these illustrations were made. It is five and one-half inches high. The face of the bowl is so marked and well executed that one is astonished at its life-like appearance. Its expression is indeed so natural and human that it is not altogether agreeable. In color the face is a light clay, probably the tint of the natural clay of which it was made. The rest of the head is stained or painted red. The forehead is low, but prominent. The eyes small. The ears are finely modeled. The lips, which are tinted red, are parted, as if about to speak. What a history this little bowl could unfold, if permitted to tell the story of its life!*

Returning to the pictograph, it will be observed that the pipe in the lower banner is of the familiar square pattern often found in Tennessee, and illustrated in the chapter upon pipes.

Captain Carver, who spent three years traveling through the

* The writer saw this fine bowl in the Riggs collection, at the Cincinnati Centennial Exhibition, in 1888, and takes pleasure in presenting to the antiquarian public probably the first good engraving of it. It is now in the Riggs collection, at the Cincinnati Art Museum. Mr. Riggs regarded it as worth more than the entire balance of his pottery collection of several hundred perfect specimens. He called the ancient cemetery from which it was taken "The Royal Mound," as it appeared to have been the burial place of persons of distinction in their day and generation. Earth-works embracing about twelve acres (about the average area of our Tennessee works) inclosed the mound group. This bowl, well marked with the face and tattoo marks of some distinguished personage, perhaps belonged to the aboriginal set of terra cotta of some old chief. The physiognomy of this ancient gentleman, however, like the heads and faces of the royal Peruvians and Central Americans, exhibits no special marks of a high blooded pedigree.

interior of North America, 1776-8, says the pipe "was used as an introduction to all treaties, as a flag of truce is among Europeans." A third banner or shield is faintly traced upon the reverse side of the stone tablet. They seem larger than ordinary battle shields, and may have been ceremonial shields or banners. De Soto found a native chief, the haughty Tuscaluza, using a large ornamented banner.*

The double serpent emblem or ornament upon the banner may have been the badge or totem of the tribe, clan, or family that occupied the extensive earth-works at Castalian Springs in Sumner county, near where the stone was found. The serpent was a favorite emblem or totem of the Stone Grave race of Tennessee, and is one of the common devices engraved on the shell gorgets taken from the ancient cemeteries, as will be observed in subsequent illustrations. A serpent totem in pottery, found in Davidson county, but near the border of Sumner county, is also illustrated in the next chapter. The circles or sun symbol ornaments on the banners and dresses, are the figures most frequently graven on the shell gorgets found near Nashville. Father Membré informed us that the natives on the Red river, in 1686, wore "gala dresses," ornamented with "painted suns," and that they worshiped the sun,† and when Bartram visited the southern Indians, in 1773, he reported that the Indian women "make moccasins, spin and weave curious belts and diadems for men, fabricate lace, fringe, embroider and decorate their apparel." ‡

Hubert Bancroft tells us that the Navajos and Pimas, village Indians of New Mexico and Arizona, wore girdles around their waists, neat moccasins, leggins, aprons, and short petticoats of deer

* "Beside him (Tuscaluza) was his standard bearer, who bore on the end of a lance a dressed deer-skin, stretched out to the size of a buckler. It was a yellow color, traversed by three blue stripes. This was the great banner of this warrior chieftain."—*Conquest of Florida* (Irving), page 256. Shields of wood, skin, and hides were used by the natives.—*History of Alabama* (Pickett), Vol. I, page 58.

† *Discovery of the Mississippi* (Shea), pages 217, 228.

‡ *Bartram's Travels*, page 511. London, 1792.

skins, and necklaces of beads and shell-work.* We are also told that belts and garters were a specialty of Navajo manufacture,† all indicating that the dresses of the figures on the engraved stone resemble the dresses of the old southern Indians and the village Indians of the Far West.

The details of this interesting pictograph, and the location in which it was found, clearly identify it as a relic of the Stone Grave race. It is entirely in harmony with our knowledge of the race derived from other sources. It is also in harmony with the general views expressed elsewhere in this volume as to the culture status of this ancient race. While it presents a true picture of Indian life in its rude and barbaric state, its details, and the art which engraved it, indicates a status slightly above that of the historic Indians of the early frontier. We doubt whether any inscribed stone of more archaeological value has been discovered among the prehistoric remains of the Mississippi valley. It is to be regretted that the disintegration of the stone has partly obliterated some of the outlines of the faces and heads. Like the stone idol types, the faces are too rudely executed to be of ethnic value, yet prehistoric pictographs are so rare north of Mexico, that all their details are of interest.

The images and effigy vessels of clay, from the stone graves of Tennessee and the burial mounds of Missouri and Arkansas, are, also, among the most interesting antiques yet discovered. They call back to life the personality of the old mound builders more vividly than any other remains. While they can not be regarded as presenting individual or exact types of this ancient race, some of the faces are so marked and expressive that they must be at least partial imitations or reproductions of the lineaments and features before the eyes or in the mind of the native artisans who made them. It is remarkable that they represent no uniform or particular type. The varieties of features and expressions are, indeed, as great as one

* *Native Races* (Bancroft), Vol. IV, pages 531, 532.

† *Bureau of Ethnology Report*, Vol. II, page 434.

would observe along the streets of a metropolitan city. Noses, Roman, plebeian, and Ethiopian, are all represented. Features of almost Caucasian regularity, the high cheek bones of the Indian, heavy African features, foreheads high and low, close fitting caps, and high pointed hats, may all be noticed among the characteristics of these statuettes of clay.*

A group from the author's collection, all found in the ancient



FIG. 21.—TERRA COTTA HEAD, FROM CEMETERY NEAR NASHVILLE.

cemeteries near Nashville (one-third natural diameters or sizes), is presented as the *frontispiece* of this volume. It is engraved by the "Moss process," directly from a photograph of the objects, and is, therefore, an exact and truthful presentation of these images. It does not give the full strength of some of the faces and outlines, owing to their light color, but it is a faithful reproduction of the

* Charnay reports, as a remarkable fact, the great variety of types of faces and features in the terra cotta figures found among ancient Mexican remains.—*Ancient Cities of the New World*, page 132.

photograph. The clay paste of which they were made, as will be observed, is of different colors. The majority of them are reddish-brown. Some are of a light cream or clay color: and, occasionally, one is found of a rich and finely polished surface, nearly black. Like most of the earthenware from the graves, the clay paste has been mixed and tempered with pounded shells from the rivers, but it is usually finely ground and well burned. A front view of the little dark head in the upper line of the frontispiece is shown in Fig. 21. It is one of the best and hardest pieces of ware, as well as one



FIG. 22.—FEMALE HEAD, FROM CEMETERY NEAR NASHVILLE.

of the best specimens of art, found in the Noel cemetery. The illustration does not quite equal the original, either in outlines or expression. The light female head, on the upper line of the frontispiece, is presented in profile in Fig. 22. The photo-engraving does not do justice to it, owing to its light color. In fact, neither of the pictures fully illustrates the dignity and grace of the original. The head belongs to an image or effigy vessel, and the hole, through which the string was passed to hang or carry it, may be observed at the back of the neck. The holes for the earrings may also be seen, and a curious little loop or hole over the forehead, possibly intended to represent some custom of wearing a ring or ornament there. This fine female head was obtained from an ancient cemetery, on

the Byser farm, on White's creek, about five miles north of Nashville.*

The square crown or ornament rising to a point in a series of layers on the large light head in the frontispiece was a favorite head dress of the Stone Grave race. We have not observed it on the pottery heads from other sections. It was, doubtless, copied from



FIG 23.—TERRA COTTA IMAGE, FROM CEMETERY NEAR NASHVILLE.

the fashions of the times, in the Cumberland valley, and is not unlike some of the modern conceits of the white race.

The rather rudely engraved figure (No. 23) will be also recognized as one of the statuettes of the frontispiece. He bears the historic name of "Sitting Bull" in our catalogue. The face of the original in its characteristics is of a marked red Indian type. The

* It was kindly presented to the author by Mrs. J. M. Leech, of Nashville. There was a large cemetery on this farm, and a sepulchral mound, with layers of graves three or four deep, from which we obtained a number of fine relics; but, like most of the burial grounds near Nashville, no evidences of military or defensive works remain.

next figure on his left we call "Mrs. Sitting Bull," as both were found in the same grave, and appear to have been the work of the same aboriginal artist. The two smallest images in the frontispiece are solid, and may have been toys or charms; the smallest—the tiny little fellow at the end—being quite perfect, but only about an inch and a half high. The rest of the figures are hollow, and all have holes in the backs of the heads, and may have been used as vessels or for some purposes useful as well as ornamental.

Plate III is a reproduction directly from the photograph, presenting different views of some of the images of the frontispiece group, with others, that the reader may have a better idea of these interesting objects. It will be observed that the dark figure fronting on the upper line has a contracted forehead, and features somewhat resembling the Ethiopian type. This resemblance is much stronger in the original, and invests this unique image with special interest. The owl or bird-shaped vessel, with the well-painted feathers (Plate III), was taken from a grave in the Noel cemetery. A similar one, of finely polished surface and better burned ware, was dug up by Prof. H. H. Wright, of Fisk University, in the same cemetery. Prof. Cyrus Thomas, of the Bureau of Ethnology, recently exhibited a handsomely painted one to the writer, of the same form, found in East Tennessee.

The ancient graves in Missouri and Arkansas have also furnished a number of similar figures,* and types almost identical of light clay, and with the same feather marks, are to be seen among the modern pottery of the Zuni Indians of the pueblos.† A well-formed owl, carved out of hard stone, and about four inches high, was found within the mound works, near Saundersville, in Sumner county, Tennessee. Nearly all the images and effigy vessels of light clay were probably originally painted or decorated in various colors, but the coloring has faded, or become very indistinct.

It will be observed that a number of these statuettes are hunch-

* Bureau of Ethnology, Vol. IV, page 422.

† Bureau of Ethnology, Vol. IV, pages 364, 365.

backs. This is also a characteristic of many of the clay figures representing the human form found in Missouri and Arkansas. The hump is so large, so invariably of the same form, and so common a feature, that there must have been some special design or object in its use, but we have not been able to discover it.

The humps are generally beaded or ornamented. perhaps in imitation of vertebræ.

The two outside images on the upper line of Plate III are solid,* but nearly all the large images are hollow, and have openings at the backs of the heads, as if used for bottles or other useful purposes. Possibly, they may have contained some kind of prehistoric "Worcestershire sauce," or aboriginal vinegar, or other

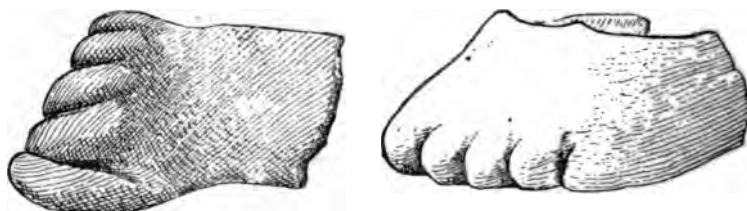


FIG. 24.—FRAGMENTS IN TERRA COTTA (TWO-THIRDS).†

luxuries of the ancient cuisine. They are generally called "idols." It is difficult to understand why they should be molded into inconvenient human forms for use as ordinary bottles or vases; yet the fancy for the grotesque and for animal forms was so strong among the ancient races of America, that convenience of use was probably frequently sacrificed to gratify the desire for these peculiar forms. A large proportion of the pottery used by the ancient Peruvians was of grotesque and animal forms. This was also a characteristic of ancient Pueblo and Mexican pottery. These quaint figurines of terra-cotta found in the stone graves of Tennessee vary from about

* The larger one (found near Nashville) is from the fine collection of the Tennessee Historical Society. The smaller one is the property of Mrs. James L. Gaines, of Nashville, and was found in West Tennessee. The rest are in the author's collection, and were taken from the Noel cemetery.

† Author's collection.



an inch to a foot in height. Illustrations of their various and peculiar forms might be multiplied almost indefinitely. The large hand and foot in well burned clay (Fig. 24), found in Stewart county, indicate that some of these images must have been several times larger than any complete pottery figures yet discovered, and that they were probably well-modeled.

More images or idols of stone have also been found within the limits of Tennessee than in any other state or section north-east of Mexico. Colonel Charles C. Jones, of Georgia, says that "Tennessee, above all her sister states, seems to be most prolific of them." * While we can not be certain that any of these images were worshiped as idols, it is believed that they must have been in some way connected with religious or sacred ceremonies, or have been used as part of the religious machinery of the ancient native priests or medicine men. It does not seem probable that so much labor would have been expended upon these large and elaborately wrought figures of stone for purposes of mere ornament or amusement. They are ruder than most of the large stone images found in Mexico and Central America, yet the latter are usually of the same coarse, clumsy, and grotesque characters, and often so similar to our Tennessee images, that we are struck with the resemblance. With the analogy of idol worship in these countries before us, we think there can be little doubt but that the large images of stone found here were worshiped or venerated as sacred objects, or used in some form of religious service.

Three of the larger class of stone images or idols are illustrated in Plate IV by the photo-mechanical process, and are, therefore, more accurately presented in the picture than by any description we could give of them. The little figure on the left is an image in clay of a child bound to its cradle or hanging board, found in a stone grave of the Noel cemetery. It will be more fully described hereafter. The three idols are in the collection of the Tennessee Historical Society. They are of gray sandstone, and are from twelve to thir-

* *Antiquities of Southern Indians*, page 436.

teen inches in height. The image on the left is from Trousdale county, the center one was found by Dr. Frost, of Nashville, in Williamson county, and the one on the right is from Smith county; all within the general section occupied by the Stone Grave race in Middle Tennessee. A large and well formed female head, of dark-gray sandstone, doubtless belonging to a similar image, was plowed up near the earth-works and stone graves of Castalian Springs (Sumner county), in the summer of 1888, and is now in the Smithsonian Institution. These "idols" are usually "surface finds," but



FIG. 25.—STONE HEAD FOUND NEAR CLARKSVILLE (FRONT AND PROFILE VIEWS.)*

most of them have been discovered within or near the stone grave settlements. Dr. W. M. Clark, of Nashville, found one weighing twenty-seven and one-half pounds, in a grave near Nashville, lying beside a large skeleton.†

Images and idols of stone and clay are found in great numbers in the ancient graves of Mexico and Central America, as we learn from Hubert Bancroft, Charnay, and others.‡ Their use as objects of worship in these countries is amply authenticated.

* Johnson collection, Nashville.

† Smithsonian Report, 1877, page 276.

‡ Native Races, Vol. IV, page 385; Ancient Cities of the New World, Charnay, page 181.

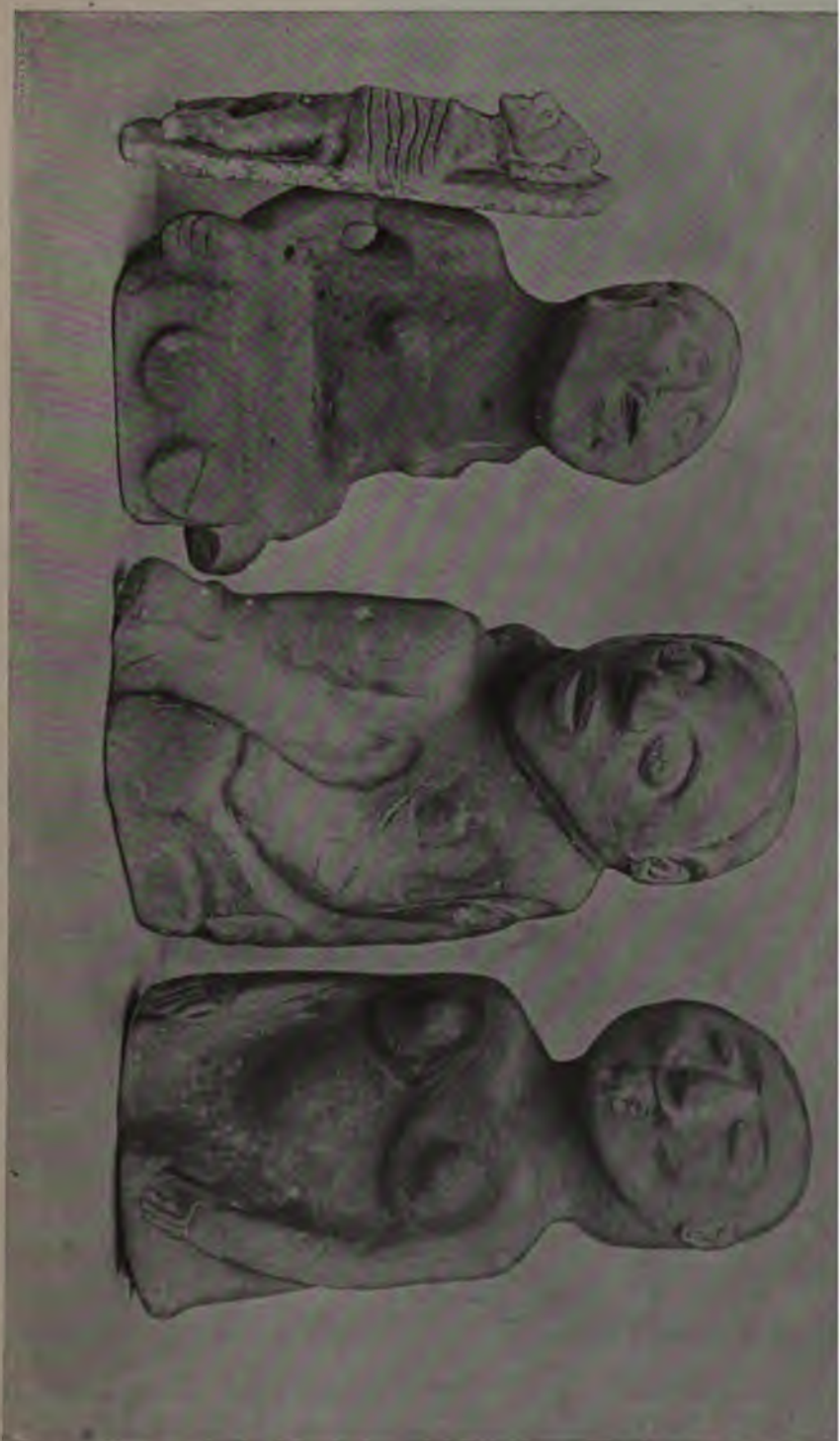


Figure 14. Seated female and male figures in the museum.

The head of a large image of marble or crystalline limestone, illustrated in Figure 25, was found by Mr. H. L. Johnson, in 1887, in a mound on the Wallace farm, near Clarksville, Tennessee. The head had been broken from its body. The latter could not be found, though diligent search was made for it. The face was also considerably injured. The outlines of the head show very clearly the flattened or vertical occiput, a distinguishing characteristic of the crania of the Stone Grave race, the transverse or parietal diameter being fully as great as the longitudinal.* The features of the face are of a heavy Ethiopian cast, somewhat similar to those of the dark image in Plate III.†

The strong peculiar lines across the face were probably intended to represent tattoo marks, or, possibly, wrinkles. Similar marks are found on the faces of some of the fine Ohio and Illinois stone pipes, and also on the face of the figure engraved on the fine shell gorget from Missouri, illustrated in Chapter IX.

The hood or head cap resembles the head-dress of many of the clay images, and of the idol in the center in Plate IV. The original head, nearly life size, we have had carefully photographed and engraved, that archæologists may have the benefit of the type in considering the characteristics of the ancient race inhabiting the Cumberland valley.

One of the finest stone images discovered in Tennessee was plowed up, in 1845, by Mr. Hartsfield, within the mound works about eight miles north of Paris, in Henry county.‡ Its face (front and profile) is illustrated in Fig. 26. The features are well formed, strong, and expressive. It was carved out of compact white fluor-spar, a mineral unknown in this portion of the Mississippi valley.

* The ancient Egyptian sculptures showed the forms of the heads of the successive races that peopled Lower Egypt.

† According to Biart, who writes very intelligently concerning the ancient Mexicans, the Aztecs were a "flat nosed" race.—The Aztecs (Biart), page 46.

‡ The illustration and description are from *Aboriginal Remains of Tennessee* (Jones), page 130.

The head only is now preserved, the image having been broken and partly destroyed by fire. It offers another illustration of the va-

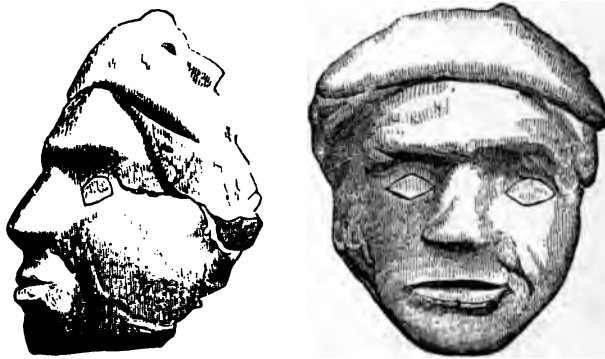


FIG. 26.—HEAD OF STONE, FROM HENRY COUNTY (ONE-FOURTH).

riety of types of faces found among the ancient remains in Tennessee.

The stone idol, rather rudely represented in Fig. 27, was discovered in a cave on the bank of the Holston river, near Strawberry

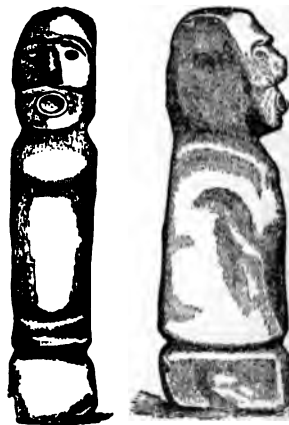


FIG. 27.—STONE IDOL (KNOX COUNTY).

Plains, in Knox county, Tennessee. It is composed of crystalline limestone, and was evidently made out of one of the lar

of the cave. Dr. Joseph Jones was of opinion that the cave was used as a place of worship.*

A number of stone images have been discovered in Smith county, Tennessee. The fine specimen from that county, represented in Fig. 28, has unfortunately been burned and destroyed. It belonged to the collection of Mr. W. E. Myer, who kindly sent us good photographs of it, from which we have had the illustrations



FIG. 28.—STONE IDOL (SMITH COUNTY, TENNESSEE).†

engraved, in order to preserve a likeness of it. It was plowed up in a field some years ago.

Traces of the garments upon the body are sometimes to be found upon the images of clay. The hands of the clay figures are also frequently found in the same position. The holes in the back of the head were evidently made for suspension. Similar holes are

* The illustration and description are from *Aboriginal Remains* (Jones), page 128.

† W. E. Myer collection.

found upon the back of the hollow clay images. The stone idol probably hung by a cord passed through the upper hole, in order to keep it in a vertical position. It was about fifteen inches high.

Haywood and other early writers record interesting accounts of similar images discovered by the pioneer settlers. Some were "surface finds," others were found in caves, or within the mounds or mound works.*

*In the beginning of this century, Mr. Jefferson was presented with two "Indian busts," which were unearthed by some laborers who were excavating along the bank of the Cumberland river, near Palmyra. They are described thus: "The human form extends to the middle of the body, and the figures are nearly of the natural size. The lineaments are strongly marked, and such as are peculiar to the copper colored aboriginal inhabitants of America. The substance is extremely hard. It has not been ascertained whether they are idols or only images of distinguished men. It will be an interesting object of research for antiquarians to discover who were the ancestors of the present Indians capable of executing such a good resemblance of the human head, face, neck, and shoulders."—*Antiquities of Southern Indians* (C. C. Jones), page 435.

Judge Haywood, the early historian of Tennessee, also gives the following account of an antique idol: "Upon the top of a mound at Bledsoe's Lick, in Sumner county, Tennessee, some years prior to 1823, was plowed up an image made of sandstone. On one cheek was a mark resembling a wrinkle, passing perpendicularly up and down the cheek. On the other cheek were two similar marks. The breast was that of a female, and prominent. The face was turned obliquely up toward the heavens. The palms of the hands were turned upward before the face, and at some distance from it, in the same direction that the face was; the knees were drawn near together, and the feet, with the toes toward the ground, were separated wide enough to admit of the body being seated between them. The attitude seemed to be that of adoration. The head and upper part of the forehead were represented as covered with a cap or miter, or bonnet, from the lower part of which came horizontally a brim, from the extremities of which the cap extended upward conically. The color of the image was that of a dark infusion of copper. If the front of the image were placed to the east, the countenance, obliquely elevated, and the uplifted hands in the same direction, would be toward the meridian sun."—*Natural and Aboriginal History of Tennessee*, pages 123, 124.

Haywood describes another image, dug up on the McGilliam farm, on Fall creek, in Wilson county, as follows: "The figure is cut out of a hard rock, of what kind Mr. Rucker could not determine. It was designed for a female statue. The legs were not drawn. It only extended a little below the hips. It is fifteen inches long, and thick in proportion. It has a flat head, broad face, a disproportionately

The little head of sandstone, nearly two inches high (Fig 29), was recently found by Mr. John Blunkall, in a stone grave cemetery a few miles west of Nashville. We present back and front views of it, as the cap and dressing of the hair are quite interesting. A wide band or tassel seems to fall from the back of the cap or head-dress.

Dr. Gerard Troost, the learned geologist of Tennessee, also described a number of Tennessee images and idols. One of these images of sandstone is now in the fine archæological collection of Mr. A. E. Douglass, at the Museum of Natural History, in New

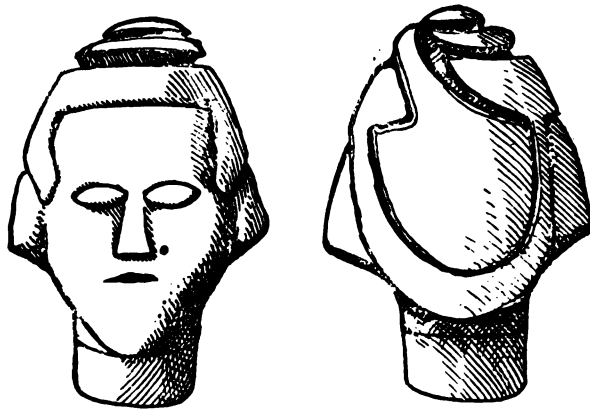


FIG. 29.—SMALL STONE HEAD (R. A. HALLEY COLLECTION).

York City. In its general form and appearance, it resembles the image on the right of Plate IV. Haywood, Dr. Troost, Dr. Ramsey, and Dr. Jones all report evidences of the existence of phallic

long aquiline nose, low forehead, thick lips, and short neck. The chin and cheek bones are not prominent, but far otherwise. On the back of the head is a large projection, so shaped as to show, perhaps, the manner of tying and wearing the hair. (See Historical Society pictograph.) The nipples are well represented, though the breasts are not sufficiently elevated for a female of maturity. The hands are resting on the hips, the fingers in front, and the arms akimbo; around the back and above the hips are two parallel lines, cut, as is supposed, to represent a zone or belt. The ears project at right angles from the head, with holes through them. It was found a few inches beneath the surface of the earth. No mounds are near, but an extensive burying ground of great antiquity."—*Natural and Aboriginal History of Tennessee*, pages 162, 163. Some of the pottery images are marked with parallel lines across the back above the hips, like this stone image.

rites or worship in ancient Tennessee. In some of the images and objects discovered, the membrum generationis is prominent. The latter is sometimes found separately carved or molded with much labor and skill in stone and clay.*

The most interesting image from Tennessee described by Dr. Troost † is illustrated in Fig. 30.



FIG. 30.—IMAGE FOUND IN A SEA SHELL.

It represents a small, nude human figure in clay in a large tropical shell (*Cassis flammea*), from which the interior whorls and column, and the front have been removed, to form the shrine or sanctuary within which the image was placed. The point of the shell was also cut, or ground off, to form a pedestal for it to stand upon. The image occupied its place in this large shell when plowed up in the Sequatchie valley.

* Dr. Troost had in his collection a number of carefully carved representations of the male organ of generation. Similar objects have been found in Georgia and other adjacent states.—*Antiquities of Southern Indians* (C. C. Jones), page 439; *Aboriginal Remains of Tennessee* (J. Jones), page 135.

† *Transactions of the American Ethnological Society*, Vol. I, pages 355–365.

This curious relic presents evidence of some value that the ancient inhabitants of Tennessee were addicted to the worship of idols or images, or regarded these objects with special veneration; and the presence of the large number of figures of stone would seem conclusive on this point. It is certain that the ancient Mexicans and Central Americans worshiped similar objects, some of them equally rude. Images of stone and little earthenware figures, like the rude idols of Mexico, have also been found in the graves of the pueblo districts and other sections north of Mexico.*

According to the testimony of Adair, Bartram, and Timberlake, the Cherokees and most of the modern tribes of southern Indians were not given to idolatry. Some of the southern tribes venerated the sun, the moon, and other material divinities, and nearly all Indians appeared to have some general, but rather obscure, conceptions of a Great Spirit, and "a happy hunting ground" in a future world.†

It was the custom of all American aboriginal tribes, savage, barbarous, and semi-civilized, to bury their dead with provisions, vessels, implements, or other evidences of their faith in some kind of a future existence.

Statues of wood, we are told by De Soto's chroniclers, were found at the entrance to the temple or mausoleum at Talomeco. They were of gigantic size and were carved with considerable skill.‡ Adair describes "a carved human statue of wood" at the chief town of the upper Muskogee country, but this, like the wooden statues at the temple, was doubtless regarded as a memorial, or venerated only as the effigy of some hero. Among the modern Indians, the Natchez, one of the most ancient and advanced tribes,

* Prehistoric America (Nadailac), page 239; Native Races (Bancroft), Vol. II. page 800.

† According to Colonel Garrick Mallery, the "Spirit Land" or "Happy Grounds" of the North American Indians, like the Paradise of the Jap neither a heaven nor a hell, and, in fact, was an abode without very w limits as to time or place.

‡ Narratives of De Soto (Buckingham Smith), page 31. New York,

were probably worshipers of idols, as we learn from Father Petit that "the Natchez have a temple filled with idols. These idols are different figures of men and women, for which they have the deepest veneration." In another passage he is more explicit: "Their idols are *images of men and women made of stone and baked clay, heads and tails of extraordinary serpents, stuffed owls, pieces of crystal, and the jaw-bones of great fishes;*" * a startling unorthodox

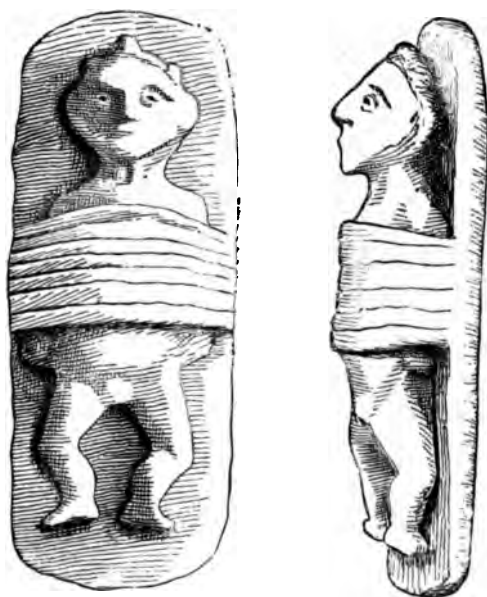


FIG. 31.—IMAGE IN CLAY, FROM STONE GRAVE NEAR NASHVILLE.†

and polytheistic assortment of divinities, indeed; but Father Petit's statement is not wholly at variance with the strange mythology and religious beliefs of the Indians.‡

* Quoted by C. C. Jones (*Antiquities of Southern Indians*, page 427).

† Author's collection.

‡ We are informed that the Kiowa Indians, now living in the Indian Territory, "are idolators, having ten idols symbolizing the stars; and an eleventh, about the size of a large doll, is called the 'Pleasant Life,' and is regarded with great veneration. The priestly office is hereditary in the family of the tribe by whom the worship and ministrations to the gods are performed."—*Philadelphia Presbyterian*, Jan-

Among the archæological treasures found in the stone graves of the Noel cemetery, recently discovered near Nashville, was the unique little image, in clay, of a child or papoose strapped to its cradle-board, photo-engraved in Plate IV, and also illustrated in Fig. 31.

It was found in a child's grave by Mr. George T. Halley, of Nashville, an intelligent young explorer and collector, from whom we obtained it. The illustrations are correct in their details, but slightly magnify its rudeness, as will be observed by turning to the more exact photo-engraving. It is nine inches long, and four inches wide, and was doubtless placed by the hands of some weeping Indian mother in her child's grave, as a memorial tribute, or as a toy or doll of which the child was fond.

It establishes the fact, heretofore only presumed, of the use of the cradle-board, in infancy, by the natives of the Stone Grave race, and aids in explaining the form of their crania—the flattened occiput being the most marked cranial characteristic. The little papoose presents the appearance of a flat head, as if the head board to the cradle had also been used to depress its frontal, after the manner of the Chinooks or Flathead Indians; but, as there is little or no evidence of frontal depression among the crania found in the stone graves, the flattened forehead of this little image may represent an unusual type, or may have resulted from accidental modeling, rather than from design.

The illustrations of the toy cradles of the Zunis of the Arizona pueblos (Fig. 32), Indians of the village or sedentary class, will give

uary 26, 1889. Some of the Indians on Puget Sound are also known to worship idols made of wood.—*Smithsonian Report*, 1886, Part I, page 294. James Stevenson says: "The clay images or statuettes obtained from the Shinumo pueblos are not objects of worship, as supposed by many persons, but appear to be used to adorn their dwellings, just as similar articles are used by civilized races." "If they are objects of worship, it must be in the family only, or a secret worship, of which I have no information. Images are used, however, in their dances and religious rites, but these are of wood," etc.—*Second Annual Report Bureau of Ethnology*, page 387.

a better idea of the use of the cradle or papoose board than the image.*

The custom of fastening their infants to these boards or cradles was probably universal among all known tribes of North American Indians, and the discovery of this little image adds another link to



FIG. 32.—TOY CRADLES OF THE ZUNIS.

the chain of identities connecting the prehistoric race of mound builders with the modern Indians.

CRANIA.—Having presented various types of heads in clay and stone, it will be of interest in this connection to consider the crania of the Stone Grave race. As may be expected, they will be found to be similar in general conformation to the types represented in the images. They are fortunately in a better state of preservation than the crania of the mound building tribes in most other portions of the mound area. The rude, box-shaped sarcophagi from which

* Second Report Bureau of Ethnology (Powell), page 371.

they are obtained have protected them from pressure, and from the injuries incident to other methods of burial, and the explorer usually finds them in their original form, free from post-mortem distortion. There is, therefore, little difficulty in obtaining crania in good condition and in sufficient numbers for comparison and classification. The Smithsonian Institution has published the results of Dr. Joseph Jones's faithful explorations and studies in this department.* The Peabody Museum has also published the very intelligent observations of its assistant curator, Mr. Lucien Carr, upon some sixty-seven crania carefully taken from the stone graves and mounds of Middle Tennessee.† Careful measurements are given, and types compared and classified. The results are of great interest, but in the present somewhat confused state of the science of craniology, there is still much work to be done in this general department before satisfactory conclusions as to the ethnic status and connections of the Stone Grave race can be reached by cranial evidence.

The characteristic type of nearly all the skulls found in the ancient graves of Middle Tennessee is well defined. It is short and round, or, in scientific parlance, it is brachycephalic in form.‡

The frontal bones are elevated, but somewhat retreating. So far as we have observed, they show little or no evidence of artificial depression. The parietal bones are round and full. The occiput is almost invariably flattened. This is one of the distinguishing features, and most marked peculiarity, of the great majority of these crania. In many cases the occiput stands almost perpendicular. The vertical diameter is nearly the same as the parietal.

* *Aboriginal Remains* (Jones), page 110.

† *Eleventh Annual Report Peabody Museum*, page 361.

‡ The scientific principle upon which the classification is made, is as follows: Taking the length of the skull to be 100, as an index:

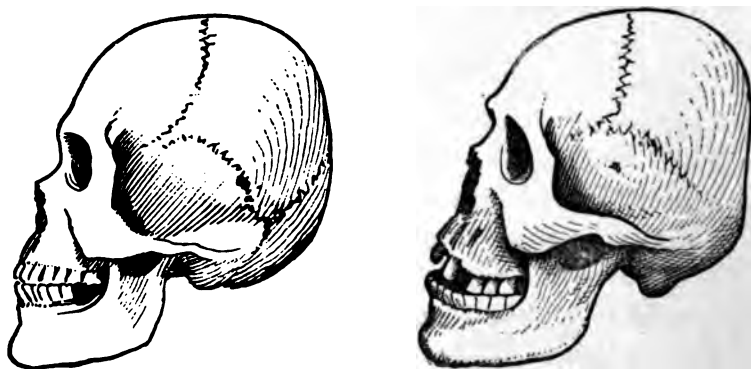
First. When the breadth is as 73 or less, to 100, they are called dolichocephalic, or long skulls.

Second. When they are from 74 to 79 in breadth, as compared with the length (100), they are orthocephalic, or oval.

Third. When they are 80 or more in breadth, as compared with the index length (100), they are brachycephalic, or short.

Comparatively few of the crania are symmetrical in outline, and sometimes the posterior flattening is so irregular or one-sided as to constitute actual deformity.

The cheek-bones are large and prominent. The lower jaw is also large and projecting, or prognathic. Some of the skeletons are over six feet in length, and must have belonged to men of unusually large and powerful physical structures, but the majority of them do not materially differ in size or form from the remains of the aborigines of other sections.



FIGS. 33 AND 34.—TYPICAL CRANIA FROM THE STONE GRAVES.

The most common forms of crania* are rather rudely illustrated in profile in Figs. 33 and 34. The outlines of Fig. 34 scarcely do justice to the upper or intellectual features of these crania.

Comparatively few of them have a relatively greater longitudinal diameter than is represented in these figures. In some of the types, the occiput is even more flattened, indicating how universal must have been the use of the cradle-board among the ancient inhabitants of the Cumberland valley, a custom evidently continued through many generations. Three crania in our small collection have transverse of parietal diameters greater than the longi-

* These crania have been sketched from types in the author's collection. The latter is numerically small, consisting of but fourteen well-preserved crania, but they have been selected from many times that number of imperfect or broken ones, dug up by the author and his employes from the cemeteries and mounds in the immediate vicinity of Nashville.

tudinal diameters, showing the enforced swelling or bulging out of the parietal bones, consequent upon this posterior pressure in infancy. One of these types is represented by Fig. 35, an engraving copied from photographs of the original. It gives a much more correct impression of the forms of these skulls than the profile illustrations.

Regarding these crania, Dr. Jones states: "The vertically flattened occiput is by no means characteristic of the entire series of crania of the Stone Grave race; and I have been led to regard this peculiarity, not as a typical characteristic dependent on the specific

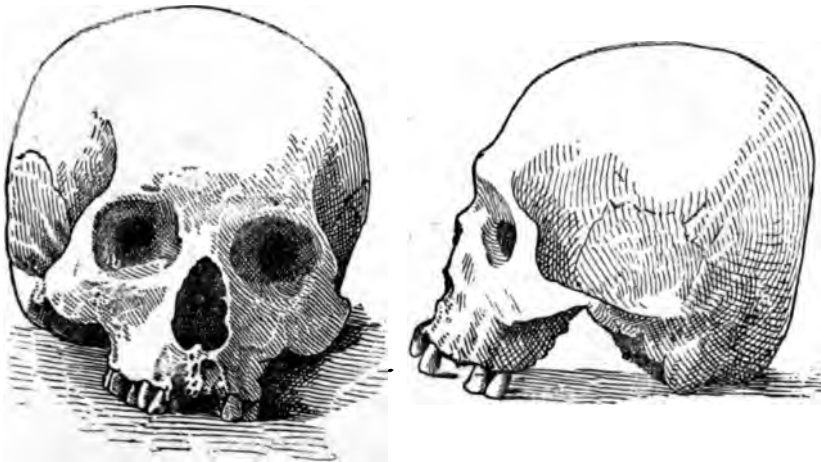


FIG. 35.—A TYPICAL SHORT SKULL.*

differences of race, but as pre-eminently, if not entirely, the result of artificial modification during infancy." †

The irregular and unsymmetrical forms of these crania, resulting from unequal pressure on the head, is shown in Figs. 36 and 37.

Fig. 36 represents a Tennessee skull dug up by Dr. Jones, in the ancient cemetery on the bank of the Cumberland river, near Nashville; and Fig. 37 is from a mound grave in south-east Tennessee.

* Ideographic Encyclopædia, Vol. I, Plate 52.

† Aboriginal Remains (Jones), page 115.

The crania of the pottery making tribes of south-east Missouri and Arkansas are very similar in form to those of the Stone Grave race of Tennessee, as might be presumed from the many other indications of their near relationship. This abnormal deformity of the occiput characterizes a large proportion of the crania of both of these sections.*

The detailed results of Dr. Jones's measurements and classification of the crania collected by him will be found in a note at the end of this chapter; also a table of measurements of the author's collection. The twenty-one crania measured by Dr. Jones were

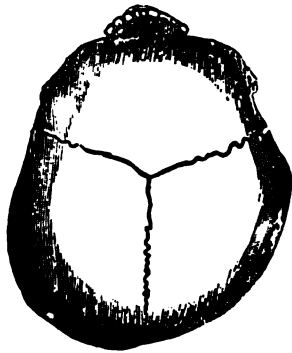


FIG. 36.—TYPICAL SKULL, FROM
TENNESSEE MOUND.†



FIG. 37.—TYPICAL SKULL, FROM
MISSOURI MOUND.†

classified by him as short and round, or brachycephalic in form. Under the rule of measurement laid down, the crania in the author's collection also belong to the same type. The few skulls from the stone graves in the vicinity of Nashville, in the collection of the Tennessee Historical Society, are of the same general form. One similar in type, found in a cave near McMinnville, and thickly incrustated with stalactital or crystallized lime, deposited in the cave, is also to be seen in the same collection. This can not be regarded as a reliable indication of very great age, as the crust of lime may have been formed within a comparatively recent period.

* Conant, page 104.

† The illustration is reduced from a similar one in Conant's *Footprints of Vanished Races*, page 106.

Professor Carr, after a careful examination of the sixty-seven crania collected by Professor Putnam from the stone graves near Nashville, states that, while the "mean" measurement brings them, as a whole, within the round or short class, there are some crania in the collection that can not be regarded as brachycephalic. After an elaborate analysis, in his table of measurement he finally classes five as dolichocephalic or long; eighteen as orthocephalic or oval; and forty-four as short or brachycephalic.*

In exploring the extensive cemeteries of the Ohio mound builders, at Madisonville, near Cincinnati, Prof. Putnam and Dr. Metz examined about one thousand four hundred crania, and of this number about one thousand two hundred were pronounced short or round. The rest were oval or long, indicating the introduction of these latter types among the Ohio mound tribes in somewhat the same proportion as they were found in the ancient cemeteries of Tennessee.

Prof. Carr pays our prehistoric Tennesseans a rather doubtful compliment, in stating that their crania, judged by the ordinary rules of measurement, would rank higher than those of the ancient Peruvians, the Australian, or the Hottentot.†

He also states that the crania from Tennessee, in the Putnam collection, show little or no evidence of artificial frontal flattening or depression. Our observations have led us to the same conclusion. The prevalence of the custom among the Natchez and neighboring tribes of flattening the foreheads of their children in infancy by artificial means, as reported by Adair, Du Pratz, and other early writers, would seem to indicate that the Natchez were probably not closely related to or descendants of the mound building tribes of Tennessee. This test, however, can not be regarded as conclusive.

One of the skulls found by Dr. Jones in the burial mound on the bank of the Cumberland river, opposite Nashville, had an internal capacity of one hundred and three cubic inches, nearly

* See tables at the end of this chapter.

† Eleventh Annual Report of the Peabody Museum, page 384.

equaling the capacity of the largest recorded Caucasian skull. Prof. Carr also reports one of extraordinary size, far above the European average, in the Putnam collection. The capacity of the smallest adult skull in the list was less than sixty per cent of this one, showing the great variations in brain measurement among crania, probably of the same tribe. It is reported that the crania of the modern Indians show a greater average cubical capacity than those from the mounds, but the size of the brain and the shape of the skull are now regarded as affording no certain indications of the intellectual capacity of persons or races; and, unless the *quality*, as well as the *quantity*, of brain can be determined, it

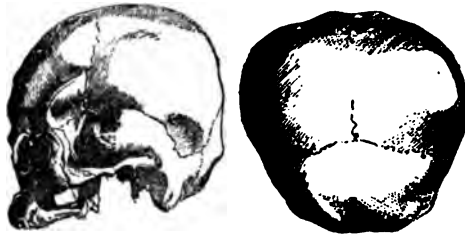


FIG. 38.—TYPICAL PERUVIAN SKULL.

seems that no satisfactory conclusions can be reached by such evidence.

The crania of the northern Indians—the Iroquois, the Hurons, the Chippewas, the Algonkin tribes—are relatively long in form, and are usually classed as dolichocephalic, although a few short or round types are found among them. A large proportion of the skulls from the ancient graves of Peru have a striking similarity in form to those of the Stone Grave race, as may be seen from the illustration presented, Fig. 38.

Dr. Ten Kate, who accompanied Frank Cushing, in 1887, in his explorations among the ancient pueblos of Arizona, and carefully examined and preserved the cranial remains, reports that the crania discovered did not differ from those of the modern pueblo Indians, and “were round or brachycephalic and flattened at the occiput.” “There was no exception to this rule.” *

* Frank Cushing, in *Science*, July 11, 1889.

Prof. O. C. Marsh also stated "that in a series of comparisons of Indian skulls, he had been struck with the similarity between those of the pueblo Indians of New Mexico and the mound builders. As the shape of the mound builder's skull is very peculiar, the coincidence is a striking one."*

The flattened occiput is also a very marked characteristic of the crania discovered among the remains of the cliff dwellers of

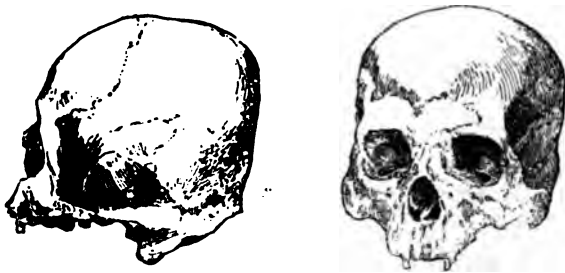


FIG. 39.—CLIFF DWELLER'S SKULL, FROM NEW MEXICO.†

New Mexico, who were neighbors and kindred of the pueblo builders, as is shown in Fig. 39.

The variations in the forms and capacity of the crania found in the stone graves and in the burial mounds of the Mississippi valley have led to much controversy. Types nearly as different as the average Caucasian and Ethiopian skulls have occasionally been found in the same ancient cemeteries, and sometimes in adjoining graves, within the mound area of Tennessee, Arkansas, Missouri, and Ohio. It is difficult to classify some of them. The predominant type, however, is the short and round or brachycephalic.‡

* Smithsonian Contributions (Morgan), Vol. IV, page 202.

† Engraving copied from Harper's Weekly of September 7, 1889. The skull of the cliff dweller is artificially distorted in infancy; the papoose boards are so well preserved as to show plainly the marks of the cords used to tie the head firmly in place, and all of the skulls found present the back of the head perfectly flat, with abnormally high foreheads, where the skull has been crowded forward. The skulls and bones were all found covered with debris, back of the cliff dwellings, between the house wall and the wall of the cave.—A. F. Willmarth, Colorado Letter, February 19, 1890.

‡ Under the leadership of Dr. Daniel Wilson, of Toronto, supplemented by the

This is the typical form of the crania of the ancient inhabitants of the southern portion of the United States, of the ancient Peruvians, the Old Mexicans, the pueblo tribes, and the cliff dwellers.

The mound builders, and the stone grave builders of Tennessee, and the ancient peoples of the South-west were evidently closely related, or were originally of the same general family stock, if their origin or relationship can be determined by the similarity in the forms of their crania. As a general rule, the crania of the ancient tribes of northern Indians belonged to the long or dolichocephalic type.*.

results of recent investigations, the theories of Dr. Morton, of Philadelphia, the eminent craniologist, as to "the ethnic unity" of the aboriginal races of America, so long accepted by scientists, have in part been set aside. Dr. Wilson insists that there is "no uniform cranial type," and, therefore, that no unity among the red races of America can be established by the crania.—*Prehistoric Man* (Wilson), Vol. II, pages 172, 200.

* The most satisfactory theory yet offered in explanation of these variations in cranial types, is that of Prof. Putnam, the intelligent archaeologist and curator of the Peabody Museum, at Cambridge, Massachusetts. In a lecture before the Western Reserve Historical Society of Cleveland, Ohio, he stated in substance that: "There were four great antique races on this continent, or the people, if of one race, show a greater diversity than any other on earth. For instance, we found in one cemetery in Ohio one thousand five hundred skeletons, and these were of various sizes and differed in their characteristics. The four great races can be resolved into two—the long-headed people and the people with short and broad heads. There is evidence that the long-headed people came from Northern Asia, and crossing Behring Strait, continued their way downward as far as California. Then they crossed the great lakes, went down the St. Lawrence, made their way along the Atlantic coast as far south as North Carolina, and spread themselves into Ohio and Pennsylvania. There is evidence that they resembled the people of Northern Asia in face and form. The short-headed people had characteristics of the people of Southern Asia, and resembled the Malay race. The first traces of them we find in Peru and Central America. From there, they worked toward the north into Mexico, New Mexico, Arizona, and, following the rivers which empty into the Gulf of Mexico, notably the Mississippi, they mingled at last with the long-headed people in Tennessee and Ohio, and were finally absorbed by them. The Indian is a descendant of those two races."

DR. JOSEPH JONES'S TABLE OF MEASUREMENTS OF CRANIA.

From the Stone Graves of Tennessee, Aboriginal Remains of Tennessee, page 110.

Number of the Cranium.	Facial angle, degrees.	Internal capacity, in cu. in.	Longitudinal diameter, inches.	Parietal Diameter, inches.	Frontal diameter, inches.	Vertical diameter, inches.	Internastoid arch, inches.	Internastoid line, inches.	Occipito-frontal arch, inches.	Horizontal perpendicularity, inches.
1	76.5	75	6.3	5.4	4.3	5.5	15	5	13.5	19
2	80	78	6	5.6	4.4	5.4	14.6	5.1	13.2	18.9
3	75	78	6.1	5.7	4.3	5.6	15	5.2	13	19
4 .....	....	82	6.2	5.7	4.1	5.5	15.2	5.4	14	19
5	77	84	6.5	5.8	4.4	5.8	15.5	5.2	14.3	19.9
6	76	68	6.4	4.9	3.9	5.5	13.9	4.5	13.8	18.2
7	81	103	7	5.9	4.8	6.4	16.8	5.3	15.7	20.8
8	80	80	6.6	5.6	4.3	5.5	15	4.6	13.8	19.3
9	78	79	7	5.2	3.9	5.8	14.7	4.6	15.2	19.5
10	81	76	6.3	6	4.4	5.4	15.7	4.6	13.8	19.4
11	80	90	6.9	5.6	4.3	6	15.7	4.8	14.8	20.3
12	77	80	6.8	5.2	4.1	5.8	15	4.7	14.4	19.5
13	82	81	6.9	5.5	4.3	5.7	15	4.8	14	19.6
14 .....	....	92	6.1	6.4	4.4	6	16.5	5.4	13.8	19.8
15 .....	....	79	6.1	5.8	4.6	5.5	15	4.8	13.4	18.9
16 .....	....	....	7.2	5.7	4.6	5.9	16	4.6	15.2	20.8
17 .....	....	....	6.1	5.5	4.1	4.5	14	....	13.6	19
18 .....	....	....	6.5	5.8	4.5	4.6	15	....	....	19.4
19	82	79.2	6.7	5.5	4.2	5.5	15	4.4	13.5	19.1
20	75	81.4	6.5	5.7	4	5.6	14.4	5	13.3	19.2
21	82	80.5	6.4	5.9	4.6	5.7	15	4.9	14	19
Maximum.....	82	103	7.2	6.4	4.8	6.4	16.8	5.4	15.7	20.8
Minimum.....	75	68	6	4.9	3.9	4.5	13.9	4.4	13	18.2
Mean.....	78.8	81.44	6.5	5.68	4.21	5.56	15	4.57	13.88	19.8

TABLE OF MEASUREMENTS.

Author's Collection.

Number of Cranium.	Longitudinal di- ameter, inches.	Parietal diam- eter, inches.	Frontal diam- eter, inches.	Vertical diam- eter, inches.
1.....	6.3	5.6	4.2	6.1
2.....	5.9	6	4.3	5.7
3.....	6.1	5.8	4.1	5.6
4.....	6	5	4.1	5.4
5.....	5.7	5.2	3.8	5.3
6.....	5.5	5.2	3.6	5.3
7.....	6.1	6.4	4.4	6.2
8.....	6	5.7	4.7	5.9
9.....	6.3	5.7	4.2	5.8
10.....	7	5.8	4.1	6.2
11.....	6.3	5.6	4.3	5.7
12.....	5.8	6	4.2	5.8
13.....	6.1	5.6	4.6	6
14.....	6.1	5.1	4.1	5.5
Maximum ...	7	6.4	4.7	6.2
Minimum ...	5.5	5	3.6	5.3
Mean	6.1	5.62	4.2	5.7

There are three unusually small crania in the collection; No. 6, was that of a young person, not fully grown, judging from the dentition. An ordinary pair of calipers and a fine decimal rule were used in making the measurements. They are made with accuracy; but the writer makes no claim whatever to scientific attainments as a craniologist.

These crania were selected and placed in our collection mainly because of their good state of preservation, and without reference to their forms.

LUCIAN CARR'S TABLE.

Mean Measurements of sixty-seven Crania, from the Stone Graves of Tennessee.

(Capacity in cubic centimetres ; length, breadth, etc., in millimetres.)

		No of crania.	Capacity.	Length.	Breadth.	Height.	Index of breadth.	Index of height.	Width of frontal.	Index of breadth.
1	Dolichocephali.....	5	1325	184	132	142	.716	.775	94	.730 and under.
2	Orthocephali.....	18	1346	172	134	141	.775	.819	89	.740 @ .800.
3	Brachycephali.....	29	1284	165	141	142	.856	.865	90	.800 @ .900.
4	Much flattened.....	15	1461	156	152	145	.973	.907	93	.900 and over.

CHAPTER V.

THE ANCIENT POTTERY.

The Art Instinct in Ancient America—The Pottery of the Historic Tribes—Superiority of Southern Ware—Methods of Manufacture—Bottle and Jar Shaped Vessels—The Coloring—Decorated Vessels—Bowl and Kettle Forms—The Fine Head Handles—Animal Forms—The Best Types—The Indian Dog—The Large Vessels—The Trowels, Rattles, Implements, Totems, and Ornaments in Pottery—Earrings, Wheels, Medicine Bottle—Fiji Pottery.

The rude forms of art in clay were probably among the earliest inventions of the human race. Birch, in his work on "Ancient Pottery," states that "clay is a material so generally diffused, and its plastic nature so easily discovered, that the art of working it does not exceed the intelligence of the rudest savage."* The Hottentots and Fuegians, races grading very low in the scale of civilization, made and used pottery.† The cannibals of the Fiji Islands, one of the most savage tribes of the Pacific, made fine vessels of pottery, of varied and graceful forms, some of them resembling the best grades of Peruvian ware. Schoolcraft tells us the arts of planting corn and making pottery came together. Writing of this natural artistic faculty among certain savage tribes, Sir John Lubbock states "that their appreciation of art is to be regarded rather as an ethnological characteristic than as an indication of any particular stage of civilization."‡

This artistic faculty seems to have been a characteristic of the aboriginal races of America. The Toltecs, the Aztecs, the Mayas, the Peruvians, and Quichuas illustrated it in its highest state. The pueblo builders of the West, the mound builders and pottery makers

* Introductory, page 1.

† Prehistoric Times (Lubbock), pages 551, 555.

‡ Prehistoric Times, page 549.

of the Mississippi valley, the north-west coast Indians, and the more nomadic tribes of Red Indians, possessed the same natural gift in varying degrees. Even the Esquimaux, in their hyperborean homes, execute carvings with force and fidelity, surpassing any similar work found among the remains of the mound building tribes. This natural art instinct doubtless belonged to the parent stock or stocks of native Americans, an inheritance, at a remote period, perhaps, from Northern or Southern Asia, or both. It has been a characteristic of the eastern races of Asia from time immemorial. It followed them out into the far islands of the Pacific ocean.*

These precedents and reflections are suggested in advance, to enable us to form a more correct estimate of the condition of society that existed in ancient Tennessee, as represented by the remains of the potter's art. In no other branches of industry, or artistic work, had its prehistoric people made such advances. Through these remains, therefore, we may hope to unlock some of the secrets of ancient domestic life, and perhaps discover traces of the ethnic history of the mound builders of Tennessee. The stone graves of our old cemeteries, those enduring receptacles of archæological treasures, have fortunately preserved, for our inspection, the remains of the native ceramic arts.

Nearly all tribes of modern Indians also manufactured pottery when first visited by the Europeans, and it is not always easy to distinguish the historic from the prehistoric ware. The northern tribes made clay pipes and utensils of the ruder class, sometimes ornamented with medallions and decorative markings. Nature kindly contributed to the ease of living at the south, and seemed to have favored a higher development in the humbler arts and industries. According to the accounts of the early writers, the pottery of some of the southern tribes was finely finished, and of varied and symmetrical forms. The Gentleman of Elvas, one of the journalists of De Soto's campaign, declares that the vessels of pottery used by the

* Sir Daniel Wilson has suggested that the forms of ancient Peruvian pottery may yet be traced back into Mongolian and Eastern art.—*Prehistoric Man*, Vol. II, page 43.

natives of Arkansas, and elsewhere, in 1541, equaled standard Spanish ware, "little differing from that of Estremoz or Montemor;"* and that "they had great store of walnut oil, clear as butter, and of good taste, and of the honey of bees preserved in pots." Marquette, the discoverer of the Mississippi, in his account of his visit to the Indians in Arkansas and Mississippi, in 1673, writes that "they used, in cooking, large earthen pots, very curiously made; also, large, baked earthen plates, which they used for different purposes."†

Adair and Lieutenant Timberlake both mention the use and manufacture of pottery by the Cherokees. The former states that when he visited them—as late as 1774—they made "earthen pots containing from two to ten gallons, large pitchers to carry water, bowls, dishes, platters, basins, and a prodigious number of other vessels of such antiquated forms, as would be tedious to describe and impossible to name;" a statement that certainly accurately describes the motley assortment of pottery we find in our Tennessee mounds and graves. The Natchez Indians were so skillful in making their "red-stained pottery," that Du Pratz, the historian of Louisiana, states that he had them make for him a set of plates for his table use.‡

Captain John Smith says, "the Indians of Virginia used pottery of clay made by women," and Bartram also mentions the fact that the Indians of Georgia made and used utensils of earthenware in 1773, the date of his visit among them.||

* Historical Collections of Louisiana, Part II, page 201; Narratives of De Soto (Buckingham Smith), page 165.

† Historical Collections of Louisiana, Part II, page 295.

‡ The women make pots of an extraordinary size, jars with medium size openings, bowls, two pint bottles with long necks, pots or jugs for containing bear's oil, which hold as much as forty pints, and, finally, plates and dishes in the French fashion.—*Histoire de la Louisiane* (Du Pratz), Vol. II, page 279.

|| Bartram's *Travels* (London, 1792), page 511. In Hariot's *Virginia*, we are informed that "their women know how to make earthen vessels with special cunninge, and that so large and fine, that our potters, with thoye wheles, can make noe better; and then remove them from place to place, as easelye as we can do our

The Mandan Indians of the Upper Missouri, we are told by Catlin, manufactured excellent pottery. "Earthen dishes or bowls," he states, "are a familiar part of the culinary furniture of every Mandan lodge, and are manufactured by the women of this tribe in great quantities, and modelled into a thousand forms and tastes. They are made by the hands of the women from a tough, black clay, and baked in kilns which are made for the purpose, and are nearly equal in hardness to our manufacture of pottery, though they have not yet got the art of glazing, which would be to them a most valuable secret. They make them so strong and serviceable, however, that they hang them over the fire as we do our iron pots, and boil their meat in them with perfect success. I have seen some few specimens of such manufacture which have been dug up in Indian mounds, and tombs in the southern and middle states, placed in our eastern museums, and looked upon as a great wonder, when here this novelty is at once done away with, and the whole mystery; where women can be seen handling and using them by hundreds, and they be seen every day in the summer also, molding them into many fanciful forms and passing them through the kiln where they are hardened."*

These historic accounts of the manufacture and general use of pottery ware, even in its ornamental and fanciful forms, among the later tribes, arrest the attention, and show us how narrow are the lines of distinction that separate the arts of the mound building tribes from the arts of some of the modern Indians.†

The custom of placing food vessels, utensils, and implements in the graves with their dead having been almost universal with the brassen kettles."—Quoted by C. C. Jones in *Antiquities of the Southern Indians*, page 448.

* *Illustrations of the Manners, Customs, etc., of the North American Indians* Vol. II, page 116.

† Prof. Cyrus Thomas states that, at a recent date, Indians residing on the Gulf near Mobile, remnants of the modern Alabama tribes, made pottery of good quality and glazed it. Specimens of this ware may be found in the National Museum, Washington.

ancient and modern tribes, the foregoing citations admonish us that we can not be certain that all the pottery found in the graves and mounds is prehistoric, or necessarily of very ancient date, notwithstanding the popular impression to the contrary.

The superiority in art and industry of the more advanced tribes of southern Indians at the dawn of history would seem to strengthen the traditions of the northern tribes, that the mound builders of the Ohio valley had been forced to the southward. A culture above that of the nomadic tribes of the North, and not of very ancient date, has, without doubt, left its impress upon these southern tribes.

The decline of the potter's art among the historic tribes dates from the introduction of European ware. It could not compete with the better utensils of the early traders, and pottery making soon became one of the lost arts. It is now unknown among the native tribes, excepting the pueblo Indians of New Mexico and Arizona, who still continue the manufacture of earthenware, in its quality, coloring, methods of fabrication, and, indeed, in many of its forms, not unlike some of the ware now found in the stone graves of Tennessee, and in the pottery districts of Missouri, Arkansas, Mississippi, Illinois, and other sections of the mound area.*

A number of early writers have also favored us with minute accounts of the methods adopted by the southern Indians in manufacturing earthenware. Dumont, in his *Historical Memoirs of Louisiana*, published in 1753, states "that, having amassed the proper kind of clay, and carefully cleaned it, the Indian women (of Louisiana) take shells, which they pound and reduce to a fine powder; they mix this powder with the clay, and, having poured some water on the mass,

* Mr. James Stevenson, of the Bureau of Ethnology, who, in 1879, in company with Frank H. Cushing, made a valuable collection of the pottery of the Zunis and other pueblo tribes for the National Museum, reports: "The resemblance of this Indian ware, in the form of the vessels, to that found in the ancient mounds of this country, is so marked, that it is scarcely necessary to remind the reader of the fact." —Reports Bureau of Ethnology, Vol. II, page 333.

they knead it with their hands and feet, and make it into a paste, of which they form rolls, six or seven feet long, and of a thickness suitable for their purpose. If they intend to fashion a plate or a vase, they take hold of one of the rolls by the end, and fixing here with the thumb of the left hand the center of the vessel they are about to make, they turn the roll with astonishing quickness around this center, describing a spiral line; now and then they dip their fingers into water, and smooth with the right hand the inner and outer surface of the vase they intend to fashion, which would become ruffled or undulated without that manipulation. In this manner they make all sorts of earthen vessels, plates, dishes, bowls, pots, and jars, some of which hold forty to fifty pints. The burning of this pottery does not cause them much trouble. Having dried it in the shade, they kindle a large fire, and when they have a sufficient quantity of embers, they clean a space in the middle, where they deposit their vessels, and cover them with charcoal. Thus they bake their earthenware, which can now be exposed to the fire, and possesses as much durability as ours. Its solidity is doubtless to be attributed to the pulverized shells, which the women mix with the clay.*

It will be observed that in mixing pounded shells with the clay, and in other details of the potter's art, the processes used within the historic period, could not have substantially differed from the earlier methods of manufacture.†

* Dumont's Memoirs, Vol. II, page 271.

† The methods of pottery making among the Zunis and other pueblo tribes, as described by Stevenson and others, are somewhat similar to those adopted by the southern Indians. The pueblo women, as usual, are the potters. Not having a supply of wood for charcoal, Stevenson says, the Zunis cover their ware ready for burning, with an oven made of dried manure. In the absence of shells, the pueblo Indians mix their clay with fragments of old pottery ground up, and with crushed lava and other materials. Similar colors are also used in ornamentation. Like the Stone Grave race of Tennessee, they also use smoothers or little trowels of clay.—Annual Reports Bureau of Ethnology, Vol. II, pages 329, 330. Hunter also describes the methods of making pottery adopted by the modern Western tribes, as follows: "In manufacturing their pottery for cooking and domestic purposes, they collect

Having very briefly reviewed the accounts of the potter's art among the modern Indians, we will defer further comparisons and suggestions as to the relative merits of the old and the modern ware, and proceed to examine the remains of this art found in the stone graves and burial mounds of Tennessee. Recent explorations in the ancient cemeteries near Nashville have fortunately yielded collections that will enable us to present, with convenience, specimens of most of the varieties of pottery heretofore discovered in the state.

In order to present some of the types with accuracy of form and appearance, the author has had a number of plates of the pottery in his collection engraved by the new photo-mechanical processes of engraving, which illustrate the objects with photographic accuracy.

The accompanying plate (No. V) presents various forms of vases, bottle-shaped vessels, and jars (a little less than one-fourth natural diameters or sizes). Some of the forms are common, others are rare. All of the vessels with fanciful, animal, or human heads have holes at the backs of the heads, doubtless for practical use. The top-knots, rather faintly shown on two of the heads, were evidently molded in imitation of the head-dresses of that time. The owl, the bear, the fox, and the human face are familiar types.

There is no evidence of the use of the wheel or lathe by the ancient pottery makers of Tennessee or the Mississippi valley. The ware is hand made, and has been built up with the aid of rude molds, and in baskets, and in cloth and matting bags. Clay trowels

tough clay, beat it into powder, temper it with water, and then spread it over blocks of wood which have been formed into shapes to suit their convenience or fancy; when sufficiently dried, they are removed from the molds, placed in proper situations, and burned to a hardness suitable to their intended uses. Another process practiced by them is to coat the inner surface of baskets made of rushes or willows with clay to any required thickness, and, when dry, to burn them as above described. In this way, they construct large, handsome, and durable ware; though latterly, with such tribes as have intercourse with the whites, it is not much used because of the substitution of cast-iron ware in its stead."—**Hunter's M**
Customs of Indian Tribes, Philadelphia, 1823, page 296.

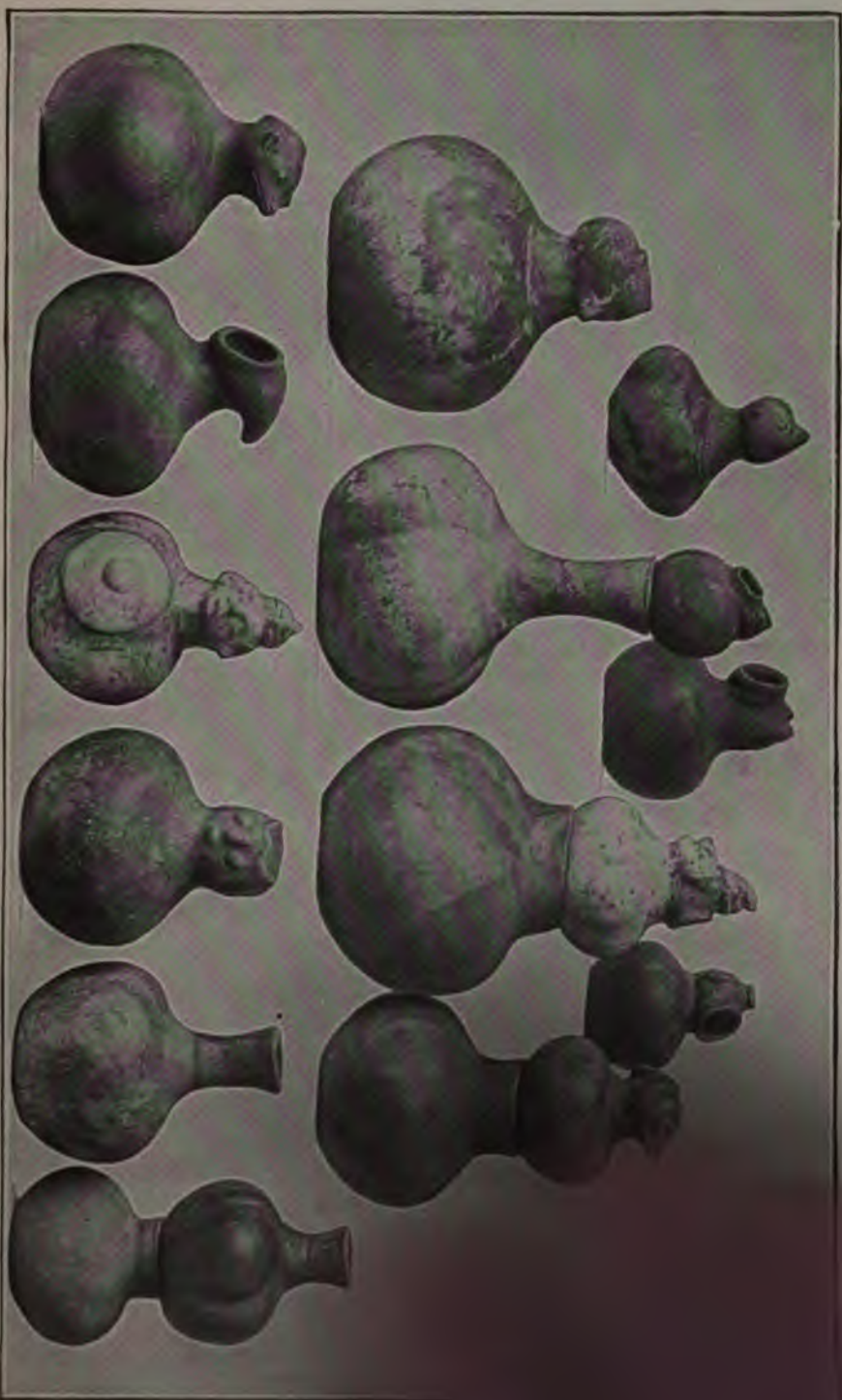


PLATE V.—Vases, jars and bottle shaped forms,
(two mugs)



were used in smoothing and rounding the open vessels. The exactness and graceful outlines of many of the forms were probably due mainly to acquired dexterity and correctness of measurement by the eye, doubtless aided by various simple mechanical appliances, such as convenience would suggest. The wheel was unknown to the pottery art of the pueblo Indians, and there is no evidence of its use in ancient Mexico or Peru. The vitreous glaze was also unknown to the potters of the Mississippi valley. Various devices were used in substitution. The ware was rubbed, oiled, and polished, and doubtless the finer grades of clay paste were applied to the surface to give it a fine and glossy finish. Some of the vessels have almost the ring of glazed ware. The absence of a vitreous glaze is a characteristic of all or nearly all the pottery of ancient America, even in the localities of its highest development. A few glazed fragments have been reported to have been discovered among the ancient ware of Central America and Mexico. The pueblo Indians had no knowledge of it. Some of our Tennessee and Mississippi vessels have as hard and fine a gloss and finish, as we have noticed upon any of the ware of the pueblos.

Nearly all of the pottery from the stone graves of Tennessee has passed through some process of burning or hardening by fire, as may be presumed from the good condition in which much of it is found. Some of it is as compact and well-burned as vitrified ware. It is not probable that it would have retained its form and hardness in the moist climate of Tennessee and in graves, often in the sandy loam of the river terraces, if originally only sun dried; but we have succeeded in taking from the graves some perfect vessels that have evidently never been subjected to the action of fire.*

About half of this earthenware is of a grey or stone color, the familiar color of much of the Missouri and Arkansas ware. The

* In cleaning some pottery from burial grounds on the river bank near Nashville, the writer's wife, who was assisting him, dipped a fine, and apparently hard frog-shaped bowl, into warm water to wash it. In a moment it was almost dissolved into its original clay, and she only saved it from total destruction by jerking it out and partly remodeling it while in its pliable condition.

finest vessels found in the large Noel cemetery, near Nashville, and in some of the neighboring burial grounds, were generally reddish brown, a specialty of this section representing the best development in the pottery art. Others are of a very light clay color, the vessels usually retaining the coloring of the clay of which they are made. Occasionally a vase or head is found, of fine and nearly black ware.

A large proportion of the finer vessels and images of light clay were originally painted or decorated with colors, some of them well burned or painted into the clay; but, in the intervening centuries of burial, the paint has faded and become indistinct. Vases handsomely decorated, when lifted from their beds in the graves, soon lose most of their colors by exposure to the air, unless protected by a coating of shellac, or some other impermeable substance.

Ochre, in its several shades, and other pigments and dyes, some of them purple or bluish tints, were used in coloring. Vessels containing finely-powdered mineral paints have occasionally been found in the caves and graves.*

The coarse, red mineral paint decorations, frequently found on the light clay-colored ware from Arkansas, are rare in Tennessee; indeed, fewer vessels ornamented with colors have been discovered in the Cumberland valley than in the pottery districts west of the Mississippi. The Tennessee ware, as a class, is darker, but the decorations on the light-colored vases appear to have been usually skillfully and deeply burned or painted into the clay, and polished or burnished in finishing, instead of being laid or painted on the outside, and left unpolished, as seems to have been the custom in Arkansas. A few vessels of lustrous black ware have been found in Tennessee. They are, however, more common in Mississippi and in the lower Mississippi valley. They are symmetrical in form, well

* Colonel W. A. Henderson, of Knoxville, has an ancient vessel of earthenware found in a cave near McMinnville. When discovered, it was partly filled with powdered red ochre. We are indebted to him for a good sample of it. Du Pratz mentions the fact that the Natchez Indians colored their pottery a beautiful red by using ochre, which becomes red after burning.—History of Louisiana, page 179.

burned, and in quality are above the grade of the average ware of the old pottery makers. Adair tells us the method adopted by the southern Indians, in "glazing" their vessels of pottery with this fine black polish, was by placing "them over a large fire of smoking pitch pine, which makes them smooth, black, and firm."*

The faint outlines of the decorations on some of the vessels in Plate V may still be noticed. They were very indistinct in the photograph engraved, although still plainly marked upon the original objects.

Better examples of decorated vessels may be seen in Fig. 40.

The bottle, or water jar, ornamented with the figure of an open hand (Noel cemetery), was discovered since Plate V was engraved. Unfortunately, its long burial has partly obliterated the design and coloring, but enough remains to show their general outlines. The design was evidently ideographic, and probably possessed some peculiar significance. A vessel of the same size and form, and similarly ornamented, but with an *up-raised* hand, was found in Franklin county, Northern Alabama, near the Mississippi line, and is well illustrated in the Fourth Annual Report of the Bureau of Ethnology,

* History of the American Indians, page 4. London, 1775. James Stevenson informs us that the Santa Clara, and other Indians of the eastern pueblos of New Mexico, color their black ware in substantially the same manner. In describing their methods of burning in rude kilns, he states: "Those vessels which the artists intend to color black are allowed to remain, and another application of fuel, finely pulverized, is made, completely covering and smothering the fire. This produces a dense, dark smoke, a portion of which is absorbed by the baking vessels, and gives them the desired black color. It is in this manner that the black ware of these eastern pueblos is produced."—Reports Bureau of Ethnology, Vol. II, page 331.

Mr. Stevenson also informs us, in the same report, that "the only colors used by the pueblo Indians" in decorating pottery, are black, red, and some shades of brown," the colors chiefly used by the old pottery makers of the Mississippi valley. His descriptions of the methods of fabricating pueblo pottery show many other points of identity. The ancient pottery arts of the tribes living upon or near the upper tributaries of the Arkansas river, in New Mexico, were doubtless known to the tribes living upon the same river in the State of Arkansas during the prehistoric period.

page 433. The two vessels are so nearly alike that they appear to have been decorated in the same aboriginal paint shop.

The other two vessels in the figure, painted with circles, are familiar types of ornamentation in the Nashville district. The black



FIG. 40.—DECORATED VESSELS FOUND NEAR NASHVILLE (ONE-FOURTH).*

and purplish colors have been so well and smoothly burned or worked into the clay that a good washing does not injure them.

A good example of ancient pottery decoration is illustrated in the little bowl, Fig. 41.

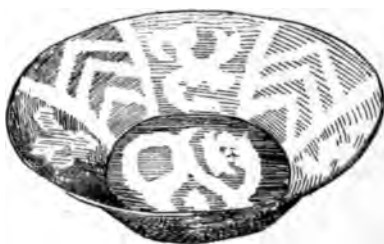


FIG. 41.—ORNAMENTED BOWL, NOEL CEMETERY (ONE-THIRD).*

Another form of ornamentation is shown in Fig. 42, a vessel discovered by Dr. Jones, within the ancient inclosure on the Big Harpeth river, near Franklin, Tennessee.

* Author's collection.

The vase is of a light yellow clay color, and on its sides are painted three crosses of dark brown—almost black color—surrounded by ornamental circles.*



FIG. 42.—DECORATED VASE FOUND NEAR FRANKLIN (ONE-FIFTH).

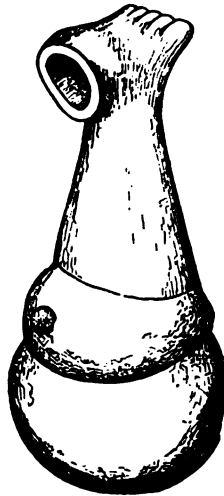


FIG. 43.—VASE FROM BIG HARPETH WORKS (ONE-THIRD).

In one of the stone graves of the Big Harpeth works, Jones discovered the vessel fashioned somewhat in the shape of a child's foot and leg—represented in Fig. 43. It was found by

* *Aboriginal Remains* (Jones), page 57. Mr. J. B. Nicklin, of Chattanooga, Tennessee, has in his fine collection of antiquities an ancient bowl and w

the skull, and was painted, but the faint lines of coloring soon disappeared.* A pipe of somewhat similar form is figured in the next chapter.

The effigy vessel, or image, Fig. 44, was found by Dr. Jones in a child's grave of the large burial mound on the bank of the Cumberland river, opposite the city of Nashville. It is of hard black ware, with a polished surface, and is hollow, with the usual aperture at the back of the head, indicating that it may have been utilized as a vase or bottle. It is certainly unique in its anatomy.†



FIG. 44.—IMAGE FOUND OPPOSITE NASHVILLE (ONE-SIXTH).

In exploring the ancient earth-works, near Lebanon, Tennessee, which he designates "the remains of a fortified Indian village," Prof. F. W. Putnam, of the Peabody Museum, discovered, buried under the earthen floors of the Indian huts, or houses, a number of antiques of clay, stone, and shell, showing the high attainments of

found in the Coxe mound (near Stevenson, Alabama, a short distance south of the Tennessee line), in form and of materials similar to our Tennessee ware; but the painted decorations upon it, in strong red or maroon coloring, are artistically executed, and are better preserved than any ornamental work in colors we have observed upon the ancient ware of Tennessee.

* Aboriginal Remains, page 60.

† Aboriginal Remains, page 44.

these ancient village Indians in some of the arts. In a child's grave in one of these houses, near the large mound, Prof. Putnam obtained the "water jar" represented in Fig. 45. It is mounted on three legs, the cavities of which connect with the body of the jar, while the cross-bars between them are solid.*

A jar very similar in form is illustrated in Plate VIII. Somewhat similar types are also found in Missouri and Arkansas.

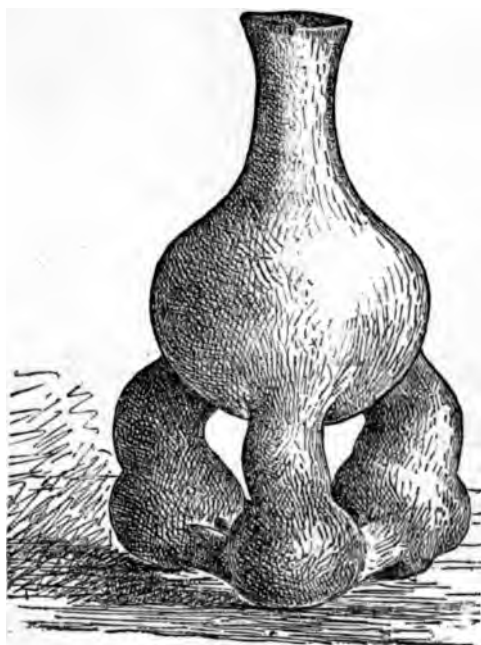


FIG. 45.—JAR FROM HOUSE WITHIN THE LEBANON WORKS.†

Prof. Putnam also found within the inclosure, near Lebanon, Tennessee, the fine jar (Fig. 46) representing a badger or some other clumsy animal. It is of a yellow clay color, and when found was

* Eleventh Annual Report Peabody Museum (Putnam), page 356.

† Contributions to Archæology of Missouri, Plate IV; Reports Bureau of Ethnology, Vol. IV, page 420.

‡ Peabody Museum, Cambridge, Massachusetts.

painted with a number of concentric figures, but they soon faded and became indistinct.*

Jars of this form are rare in Tennessee. They have occasionally been found in the pottery districts west of the Mississippi. A fine specimen is illustrated in Plate IX.

Examples of ancient Tennessee pottery of the bowl and kettle form (one-fifth actual diameters) are shown in Plate VI. (Author's collection.) Nearly all of them were obtained from the stone



FIG. 46.—VESSEL FROM LEBANON WORKS (ONE-THIRD).†

graves of the Noel cemetery. A larger number of these vessels of various shapes might have been presented in the photo-engraving, but only a limited selection of standard patterns were placed in the group, to avoid confusion of outlines. The kettle-shaped vessels found in Tennessee vary in size from little toys an inch wide to large pots a yard in diameter. The set of bowls on the right is made of excellent well-burned ware. Most of them are sym-

* Eleventh Annual Report Peabody Museum, page 359.

† Peabody Museum.



PLATE VI.—Vessels of bronze from graves.

metrical to exactness. They are polished within and without, and some of them are as hard as modern stoneware.

The largest bowls in this form are about twelve inches in diameter. Well-made vessels in imitation of sea shells are frequently found. Since this engraving was made, we obtained from the Noel cemetery a double shell with delicate flaring edges, much more artistically made than the double shell represented in the picture.

Tiny shell forms of pottery are also found. They may have been toys, or possibly the *individual salt-cellars* of some aristocratic native.

Attention is called to the painted figures on the little light-



FIG. 47.—ORNAMENTED VESSEL (ONE-HALF).*

colored bowl, and also to the half-circle lines and ornamentations on the kettles in the picture (Plate VI). These indented lines are very common styles of decoration. Some of the work of this class has been executed with considerable taste and skill, as is shown in Fig. 47 from the Noel cemetery.

The figure with the pointed cap (Plate VI) is unique, and is one of the most interesting objects yet discovered within the pot districts of the Mississippi valley. It is of rich, well-finished The bowl is as symmetrical as if made on a potter's wheel. The cap has a graceful tassel at the top, which falls behind. The encircle the bowl. The feet and legs project in front. 7

* Author's collection.

of the original is a better specimen of physiognomy than the picture represents.

The head on the bowl or drinking cup to the left is one of the best pieces of modeling in terra-cotta from the cemeteries about Nashville. The features are so obscure in the photo-engraving that we have had a separate engraving made of it (Fig. 48). The cap or helmet is a good example of this style of head gear. It is so frequently observed on the pottery heads from the graves that it must

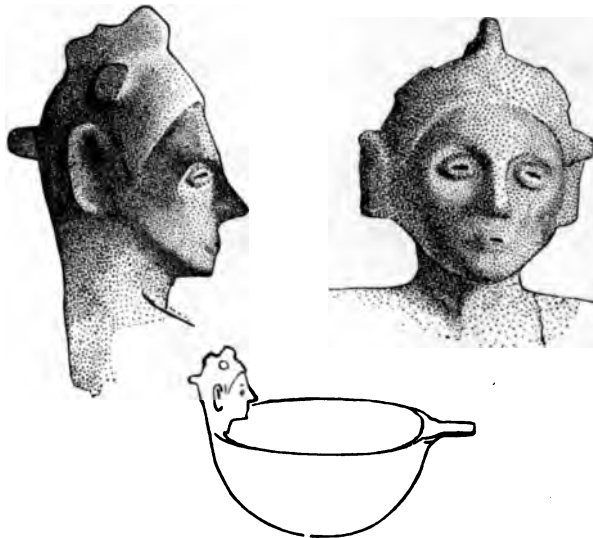


FIG. 48.—THE HEAD OR HANDLE OF TERRA COTTA BOWL (THREE-FIFTHS).*

have been one of the familiar costumes of the Stone Grave race. The graceful form of this fine dark bowl may be seen in the little outline sketch.

These ornamental handles to vessels, modeled in imitation of the human head, are a specialty of the ancient pottery of Middle Tennessee. They are found in Southern Kentucky, Illinois, and elsewhere within the Middle Mississippi district, but we think not in such numbers, and probably not of equal artistic merit. Earthenware bowls, with head handles of the same general form, are also

* Author's collection.

found among the ruins of Central America.* Other pottery handles of this form are illustrated in Fig. 49.

The head with the hat and tassel is similar to that of the "man bowl," in Plate VI. The larger head on the right is hollow, and is filled with clay pellets. When shaken, they sound like a child's rattle. It forms the handle to a large bowl about eight

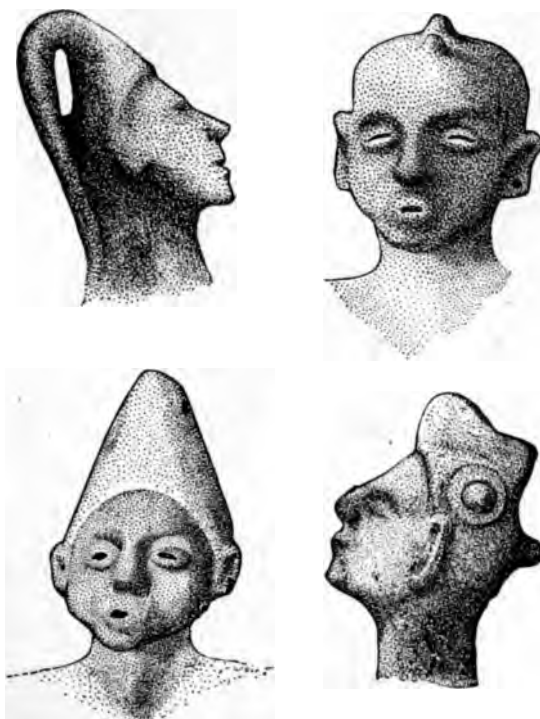


FIG. 49.—TERRA COTTA HEADS—HANDLES OF DRINKING CUPS (THREE-FIFTHS).†

inches in diameter. Pottery heads and head handles, filled with pellets, are occasionally found. It was doubtless a fancy of the old pottery makers to manufacture them in this way. Unfortunately, many a fine head has been broken or bored into, from mere idle curiosity, to find what treasures it contained. Vessels with hollow

* Ancient Cities of the New World (Charney), page 443.

† Author's collection.

handles, fashioned in imitation of bird heads and other grotesque forms, and filled with clay pellets, are also found in the Missouri pottery district, but they are usually not so artistically executed as our Tennessee specimens.*

The same idea is illustrated in the ancient earthenware of Mexico and Chiriqui, where rattling clay pellets are found in the grotesque figures or legs of the tripods and vessels of pottery.†

Some of the drinking cups of this reddish brown ware are ornamented with lines skillfully drawn or cut around the border, as represented in Fig. 50. The same beautiful scroll pattern will be

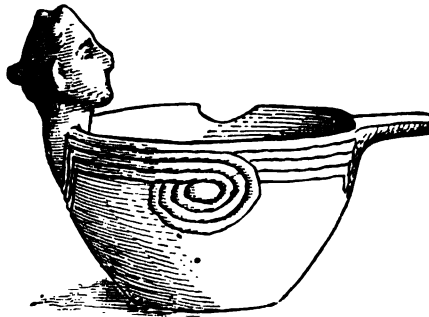


FIG. 50.—A DRINKING CUP (ONE-THIRD).‡

found on some of the engraved shell gorgets from the graves of the Nashville district.

An almost exact duplicate of this vessel from Perry county, Missouri, with the same tracing upon the border (in the collection of the Chicago Academy of Sciences), was unfortunately destroyed in the great fire at Chicago of 1871.||

The handles of the bowls and cups are often modeled in imitation of animal and grotesque forms, somewhat after the fashion

* Five of them are illustrated in Plate 15 of Contributions to the Archaeology of Missouri. See also page 27.

† Native Races (Bancroft), Vol. IV, pages 19, 388; Ancient Art of Chiriqui (W. H. Holmes), page 98.

‡ Author's collection.

|| See illustration in Prehistoric Races (Foster), page 246. Similar ornamental lines are found on Arkansas ware.

of ancient Peruvian ware. The heads of ducks, owls, bats, dogs, foxes, bears, and even the entire bodies of animals, are sometimes represented in these handles, though, like many of the little heads of terra-cotta found in Mexico, they are usually broken from the

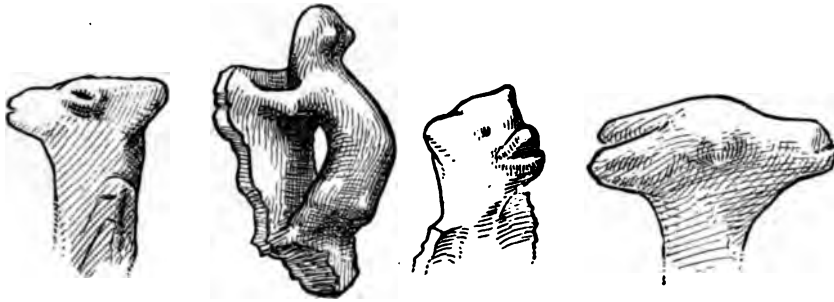


FIG. 51.—TERRA COTTA BOWL HANDLES (ONE-HALF).*

vessels and images, and are found as fragments. Examples of these head-handles and forms are shown in Fig. 51. Some of them are very spirited, and, like the human heads in clay, are executed with considerable fidelity to nature.

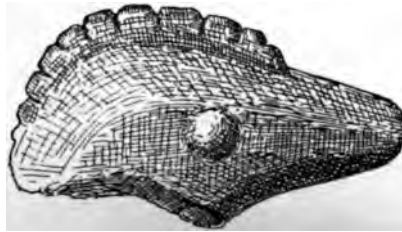


FIG. 52.—A CHICKEN-HEAD BOWL HANDLE (TWO-THIRDS).*

It is quite certain that the mound builders of Tennessee must have been a sedentary and agricultural people, as the pottery bowl-head illustrated in Fig. 52 shows that they had chickens. The pottery makers have imitated some of the features of the chicken in a very creditable way.

* Author's collection.

Head-handle bowls and grotesque ornamentations are also found among the ancient ware from the burial mounds of Arkansas. Fine examples may be seen in Fig. 53.

These two vessels were recently discovered in a mound, near Nodena, Arkansas, upon the plantation of our friend, James B. Craighead, Esq., who kindly sent them to us for examination. Nodena is on the Mississippi river, in the center of the ancient pottery district of North-eastern Arkansas. The types illustrated are rare; a little turtle is basking upon one end of the head-bowl. The pointed cap was also fashionable in Tennessee. Four lizards ornament the other bowl. This pottery has not been so well burned

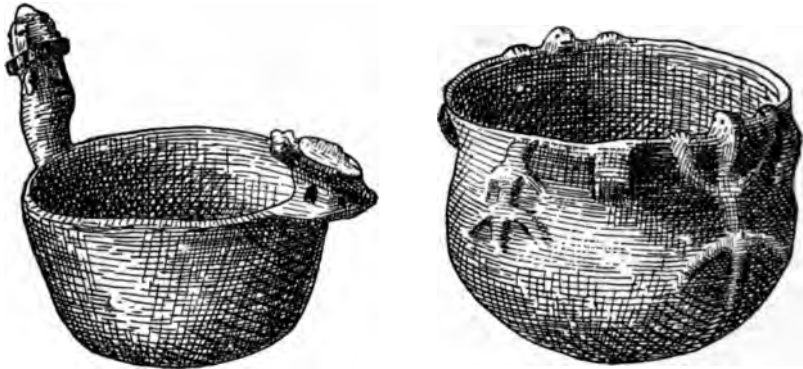


FIG. 53.—ARKANSAS POTTERY (ONE-THIRD).*

and finished as our best stone grave ware, but it is of the same general character.

It seems also that there were, probably, dogs in ancient Tennessee, a fact tolerably well authenticated by one of these pottery cup handles (Fig. 54), representing a dog, or perhaps a bear or panther, holding a bone or stick in his mouth and paws. The cup is nearly perfect, and is of fine, well-burned ware, from the Noel cemetery. If intended to represent a dog, the prehistoric canine could not have been an ordinary cur of low pedigree, such as belonged to the Indian from immemorial times, but a respectable full grown mastiff or bull dog.

* J. B. Craighead collection.

Since the last paragraph was written, we have obtained from the Noel cemetery the perfect and graceful little bowl, illustrated in Fig. 55, representing the same idea. A frog or some grotesque animal grasping a stick forms the handle. The toad or frog was the

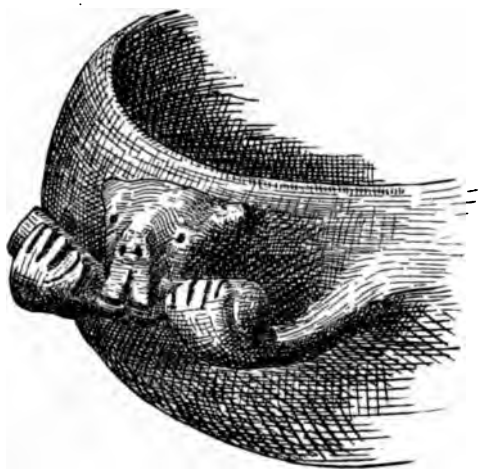


FIG. 54.—HANDLE TO DRINKING CUP (THREE-FIFTHS).*

totem of one of the families of the Creeks. Such conceits in art, so well executed, will be a surprise even to archæologists, especially to those who fail to bear in mind the intuitive artistic faculty that



FIG. 55.—ARTISTIC BOWL HANDLE (ONE-HALF).*

belongs to some of the native tribes, and their progress toward civilization, under favorable

Mr. W. H. Holmes, curator of pottery of the Smithsonian Institution, is considering "the forms and ornaments"

* Author's collection.

ancient America, states that the same idea is well expressed in the handles of wooden bowls from Alaska. A beaver grasping a bone or stick in his mouth and paws forms the handle of the bowl.

He reports that a similar pottery bowl-handle has been found in the mound district of Arkansas.* If these unusual and peculiar forms and expressions of art can not be regarded as evidences of ancient intercourse or contact between these distant sections, they are, at least, remarkable coincidences.

The animal represented in pottery, Fig. 56, was probably de-



FIG. 56.—ANIMAL HEAD (TWO-THIRDS).†

signed to imitate a wolf or panther, as an effort was evidently made, and with some success, to show its large teeth and give it a fierce expression. It is well burned, and is still stained with its original red paint. The head probably belonged to a full clay figure of the animal, as it shows no evidence of having been the handle to a vessel, and it is larger than the heads used for that purpose.

Plate VII presents a photo-engraving of a group of pottery from the graves, of fish and animal forms, one-fourth diameters (author's collection). These were familiar models of the old pottery makers, especially the sun-fish and the frog. The latter were favor-

* Reports Bureau of Ethnology, Vol. VI, page 451.

† Johnson collection.



ite family names or emblems of the southern tribes. Similar forms are also found in Arkansas and Missouri. The uniform thinness and regularity of the walls, the careful burning, the exactness of outlines, and the glossy finish of some of these vessels, show considerable artistic skill. As the little turtle-bowl on the left is an unusual type, separate engravings of it are presented

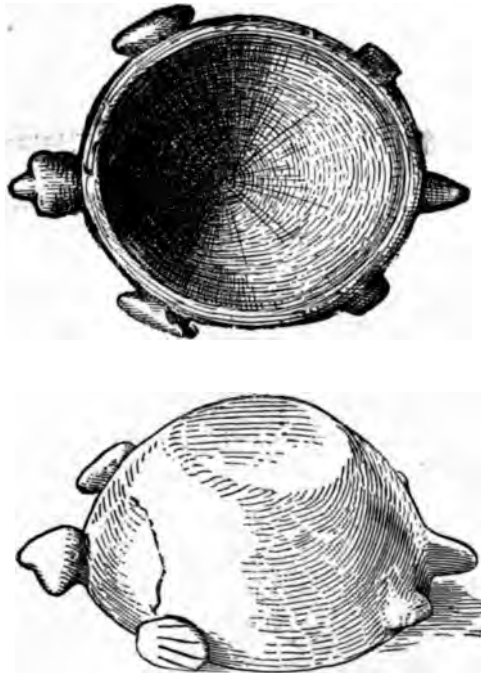


FIG. 57.—TURTLE BOWL FROM CEMETERY NEAR NASHVILLE (ONE-HALF).*

(Fig. 57), showing its outside and inside forms. The engravings, unfortunately, are stiff, and lack the graceful lines of the original.

It will be observed that many of the bowls (Plate V) are pierced with holes for suspension. Some of them were probably used as vessels for cooking, and others were doubtless used as hanging vessels in the ancient homes, and may have contained condiments, tattoo paints, bear's oil, or articles of daily use or for the toilet.

* Author's collection.

De Soto's Spanish chroniclers report that they found the residence of one of the native chiefs hung with festoons of feathers, beads, and shells. His soldiers were often struck with the gay appearance of the inside decorations of the Indian houses. In harvest time, the rafters were doubtless lined, after the Indian fashion, with a golden tapestry of maize. From the number of hanging vessels of terra cotta found, it would seem as if the ancient habitations may also have been festooned with them, as well as with shells. Bancroft tells us there were many hanging ornaments and vessels in the rooms of the Moqui pueblos.*

A number of fine types of pottery are illustrated in Plate VIII (one-fourth natural diameters). All are from the cemeteries of Middle Tennessee, excepting the dark polished jar, ornamented with the scroll pattern, which is from Mississippi, as its appearance indicates.†

The three legged jug was recently obtained from a stone grave in a mound on the George P. Allen farm, about six miles southwest of Clarksville, Tennessee. The handsome "idol pipe," of serpentine, illustrated in the next chapter, was found in an adjoining grave. The jug is ornamented with well-painted circles, but they have faded, and were very indistinct in the photograph. The light colored "water jug," with the elaborate head-dress, is from a grave in the Byser farm cemetery, on White's creek, near Nashville. Many fine objects have been obtained from this ancient settlement.

The other vessels in Plate VIII are from the Noel cemetery. They are all fine pieces of ware, especially the bowl-shaped vessels. The little cup with the excellent face has a hole in the pointed cap, for hanging. We have had separate engravings made of the finely executed medallion bowl, to show its grace and ex-

* Native Races, Vol. IV, page 668.

† The Mississippi jar and the light "water jug" with the label on it belong to the fine collection of the Tennessee Historical Society, at Nashville. The lower bowl with the medallion faces is from Mr. Otto Giers's collection. The remaining seven pieces are from the author's collection.



PLATE VIII. — Vases and vessels from graves.

21

actness. Vessels with rude medallion faces have been found in the mounds of Arkansas,* but not of this form, or so artistically mod-

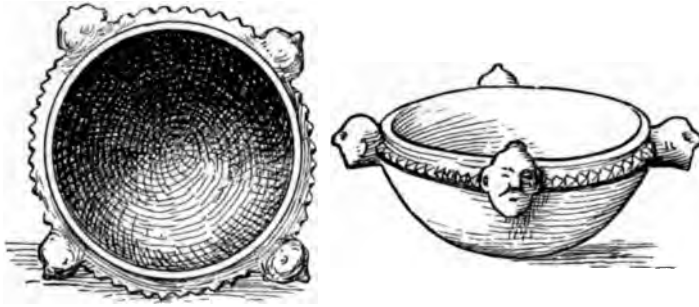


FIG. 58.—MEDALLION BOWL (ONE-FOURTH).†

The interesting man, or “leg bowl,” is an excellent piece of ware—well formed and perfect. Its design is a curious conceit.



FIG. 59.—TERRA COTTA BOWL (ONE-THIRD).‡

A vessel of similar form, from a small cemetery near the Cumberland river, five miles west of Nashville, is also illustrated (Fig. 59) to present another view of this peculiar type. It must have been

* Report Bureau of Ethnology, Vol. IV, page 414.

† Otto Giers collection.

‡ Author's collection. Mr. Frank Morrow, of Nashville, has in his possession a similar bowl, a little larger; and there is another in the collection of Mr. Moorehead, in the Smithsonian Institution, from the Missouri mound discovery. The latter is somewhat larger than the specimen illustrated, and, as we remember, a little more rudely molded. The vessel represented in Fig. 59 was obtained from an ancient stone grave by Mr. W. W. Dosier.

a clumsy and inconvenient bowl, but like some of the more civilized native tribes of America, these old villagers of the Cumberland valley were sometimes more devoted to the grotesque in art than to practical convenience.

Since Plate VIII was engraved, the writer has obtained more than a hundred new specimens of pottery from the Noel cemetery, and other burial grounds in the immediate vicinity of Nashville, many of them types of special interest. A number of them are presented in Plate IX.

The light clay-colored ware, and the dark, rich, reddish brown ware, the specialty of the Nashville district, appear in contrast in the photo-engraving. The decorations upon the light specimens can also be plainly seen. The central figure of the plate is unique. This nondescript animal is eight and a half inches long; the vessel is nine inches high. The circles and lines with which it is ornamented have evidently been painted by a skillful and experienced hand. It was taken from a stone grave on the Bosley farm, about four miles west of Nashville (in January, 1890), by Mr. Ed. Carlton, from whom we obtained it.* The body and legs are fashioned somewhat like the badger or bear jar figure discovered by Prof. Putnam within the earth-works of Lebanon. In its day and generation this fine vessel doubtless occupied a conspicuous place upon the dining floor or sideboard of some old mound builder's residence. Were it not for its canine head, and the suggestive curl of its tail, its otherwise elephantine form might pose before "the scientists" as a mastodon. The truth requires us to state, however, that a fat, waddling Indian dog was probably the animal that suggested this design.† A somewhat similar figure in pottery, with the head, face, and curled tail of a dog, apparently of the same

* Prof. F. W. Putnam and Major J. W. Powell conducted explorations upon this farm in 1877, and discovered many fine vessels of pottery and interesting remains of stone and shell.

† Among the modern Indians, dog feasts were quite common. Perhaps the dogs were fattened for the occasion. We are told that they made Hendrick Hudson



PLATE IX.—Vessels and images of pottery.

10

pug-nosed pedigree, was found in the New Madrid mound district of Missouri, and is illustrated in the *Archæology of Missouri*, published by the St. Louis Academy of Science (Plate IX), but the latter is not so well formed or so artistically decorated. A dog's head also appears upon a bowl in Plate IX. These heads give us a tolerably accurate representation of the pre-historic canine. The type does not appear to differ much from the modern dogs of the Cherokees and other tribes.

Mr. Frank Morrow, of Nashville has in his collection of pottery a bowl with a dog's head handle, and in the wide-spread jaws of the dog there is a small, rudely molded human head.

So far as we can learn, the dog was the only domestic animal possessed by the native tribes of North America prior to the Columbian discovery. The South Americans had also the llama, a patient animal, very useful as a beast of burden. The first horses and cattle came with the Spanish conquerers. Unfortunately, the aborigines of early ages were without these civilizing agencies. Their presence would doubtless have contributed greatly to advance the condition of society in ancient America.

The two images in Plate IX must originally have been decorated with some taste and skill, if we may judge from the traces of painting still visible. The hands of the larger figure are well molded in relief. The hands of the small image are painted. Both images are hollow, and have openings at the backs of the heads. The large handsome "fish bowl" is nine inches long. Vessels of this form are very numerous in the graves, notwithstanding the heads, tails, and fins upon some of them, must have rendered them inconvenient for practical use. Doubtless, the fish was a totem, or family or tribal emblem. Both the Creeks and Chickasaws had a "fish" family, or clan in their organizations.* The Creeks also a family branch named after the toad or frog.

welcome, on his first visit to the Hudson river, by "killing
this vessel was, therefore, very appropriate.—*Collections of the
Society*, Vol. I, Second Series, page 198.

* *Ancient Society* (Morgan), pages 161, 163.

The handsome eagle bowl, in Plate IX, will also be noticed, and the large center bowl (ten and one-fourth inches long) on the lower line, with the finely formed head handle. The latter is full of rattling little pellets. We have not seen a finer specimen of the pot-



FIG. 60.—POTTERY HEAD FROM LARGE BOWL (ONE-HALF).*

ter's or molder's art among the ancient ware of the Mississippi valley. The face and head are very finely formed. The pointed cap has a long tassel that falls gracefully behind in a double fold. Another of these very finely molded bowl heads, with a strong and almost handsome face, is rudely illustrated in Fig. 60.



FIG. 61.—ORNAMENTED BOWL (ONE-THIRD).†

As the oblong bowl, with an ornamented rim, is but poorly represented in the plate, we present a better illustration of its form in Fig. 61. It is a very symmetrical and graceful piece of ware.

* Historical Society collection.

† Author's collection.

There may be old or modern vessels of pottery from the pueblo districts equaling some of these highest standard types from the stone graves of Tennessee, but they have not come under our observation.

The tiny bowls and jars (Plate IX) were probably used as toys, or may have served some useful purposes. They are well molded, and as hard as the large ware. The other vessels illustrated in the plate will show some of the unusual types. It would be impossible, within a single volume, to present illustrations of all the interesting vessels and images in the local collections.

The excellent photo-engravings presented, give a softer and more finished appearance to this ware, perhaps, than it merits, as they sometimes relieve the coarseness of the materials, and allow the graces of form full effect, but they show the objects with photographic fidelity. We have seen no pottery from Missouri or Arkansas of superior quality, and very little from those sections equaling it; neither have the elaborate mounds or the ancient cemeteries of the Ohio valley yielded pottery so well made, and with such graces of form, so far as we have been able to judge from the best specimens observed in the various archæological collections in Cincinnati and elsewhere.*

* Sir Daniel Wilson and other writers seem to have the impression that the mound builders of Ohio were much in advance of other mound building tribes in their knowledge of the ceramic arts. This is an error. The Ohio ware did not surpass the standard earthenware of other sections of the mound area, and was not equal to some of the pottery of the Central and Lower Mississippi districts. Squier and Davis, in their valuable work on the Ancient Monuments of the Mississippi Valley, gave an illustration of an Ohio vase as evidence of an advanced state of art; but Dr. Rau, the able archæologist of the Smithsonian Institution, who examined the Squier and Davis collections, asserts that it was inferior to the Cahokia creek pottery of Illinois, the ordinary *Hopewell* ware. — Smithsonian Reports, 1866, page 349. Comparatively few specimens of the Ohio ware have been discovered in the mounds or ancient cemeteries of Ohio. A single burial mound of Missouri or Arkansas, however, has yielded more vessels of pottery than have been discovered within the Ohio valley since its first settlement by the whites. The latter, however, has generally disappeared, or has generally crumbled into fragments, and the preservation of its

The vessels of pottery of each of the various sections of the mound area, like the mounds of these several districts, have their marked and distinguishing features. The ware of Tennessee, Arkansas, South-east Missouri, and Southern Illinois, and that found along some of the water-ways of the lower Ohio valley, is probably of one period, and of the same tribes, or closely allied tribes. Although the local types differ, it is homogeneous, and can generally be distinguished from other ware. The ancient earthenware from the Ohio mounds is usually of somewhat coarser grades and simpler forms. Comparatively few perfect vessels of pottery have been discovered in New York, New England, the middle Atlantic states, and other sections outside of the territory of the mound builders, and they are generally of a rude character.

The ancient pottery of Georgia and Florida is well made, but, as a class, the vessels discovered appear to be of ordinary types, and not equal to the best ware found in the Cumberland valley. As we approach the Lower Mississippi district, the remains of the ceramic arts improve in character. They reached a state of comparatively advanced development within the present limits of the States of Mississippi, Louisiana, and Southern Arkansas. The ware of this general section is homogeneous, easily identified, and in finish and ornamentation appears to be equal to that of any other portion of the mound area. It is not surpassed by any pottery yet discovered north or east of Mexico.

A group of unusually fine specimens of the lustrous black ware of Mississippi is shown in Fig. 62.

The ornamented jar of this dark ware, in Plate VIII, looks like an exotic. It will be readily recognized as a Lower Mississippi type, and shows us how strongly marked are the characteristics of the pottery of the different mound districts.

These general types in fact often differ from each other nearly as widely as they differ from the pottery of the pueblos, yet they

inferior quality, as compared with some of the well-burned southern
Some of the Tennessee pottery seems as durable as Etruscan or Egyptian

all unite in establishing the homogeneous character of the ware of the Mississippi valley.

The similarity of some of the specimens of this ware to Peruvian pottery is very remarkable. The author has but four ancient vessels from the graves of Peru in his collection. They have peculiar shapes, yet vessels of nearly the exact forms of three of them have been found in the Middle Mississippi district.

Engraved sketches of these vessels will show the similarity of forms. (Figs. 63, 63A.) The vessel in the center is also a Mexican type. Many suggestive coincidences and similarities of form might be presented, showing analogies and traces of connection between



FIG. 62.—MISSISSIPPI POTTERY.*

the ancient ware manufactured in the pueblo districts and the pottery of the Mississippi valley.

Plate X is a photo-engraving of a section of a large earthenware vessel, about thirty-one inches in diameter, twelve inches high, and having a capacity of twelve to fifteen gallons. (Author's collection.) A section of a similar vessel (on the inside) was photographed, to show more clearly the texture of the basket, matting, or cloth fabric in which these large vessels were molded. The little pot, an inch and a half in diameter, was placed on the rim, in contrast

The large vessel was found within a few feet of the surface of the soil. Sul-

* These vessels were obtained from the collection of the Mississippi, by W. M. Anderson. The illustration is from the *Illustrations of the Mississippi Valley* (Wilson), Vol. II, page 23.

phur Spring," or the old "French Lick," at Nashville, in excavating for the foundations of the new spring house. This sulphur and salt spring was doubtless the central feature of a populous aboriginal settlement for centuries. Extensive burial grounds were found on both sides of the "Lick Branch," and many fine imple-



FIG 63.—PERUVIAN POTTERY.*

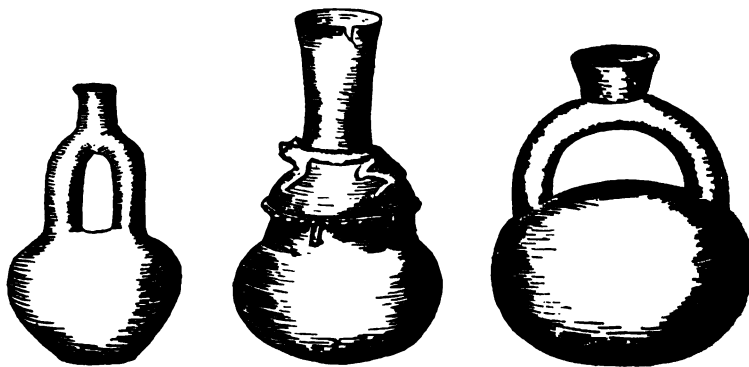


FIG. 63A.—VESSELS FROM ARKANSAS AND MISSOURI.†

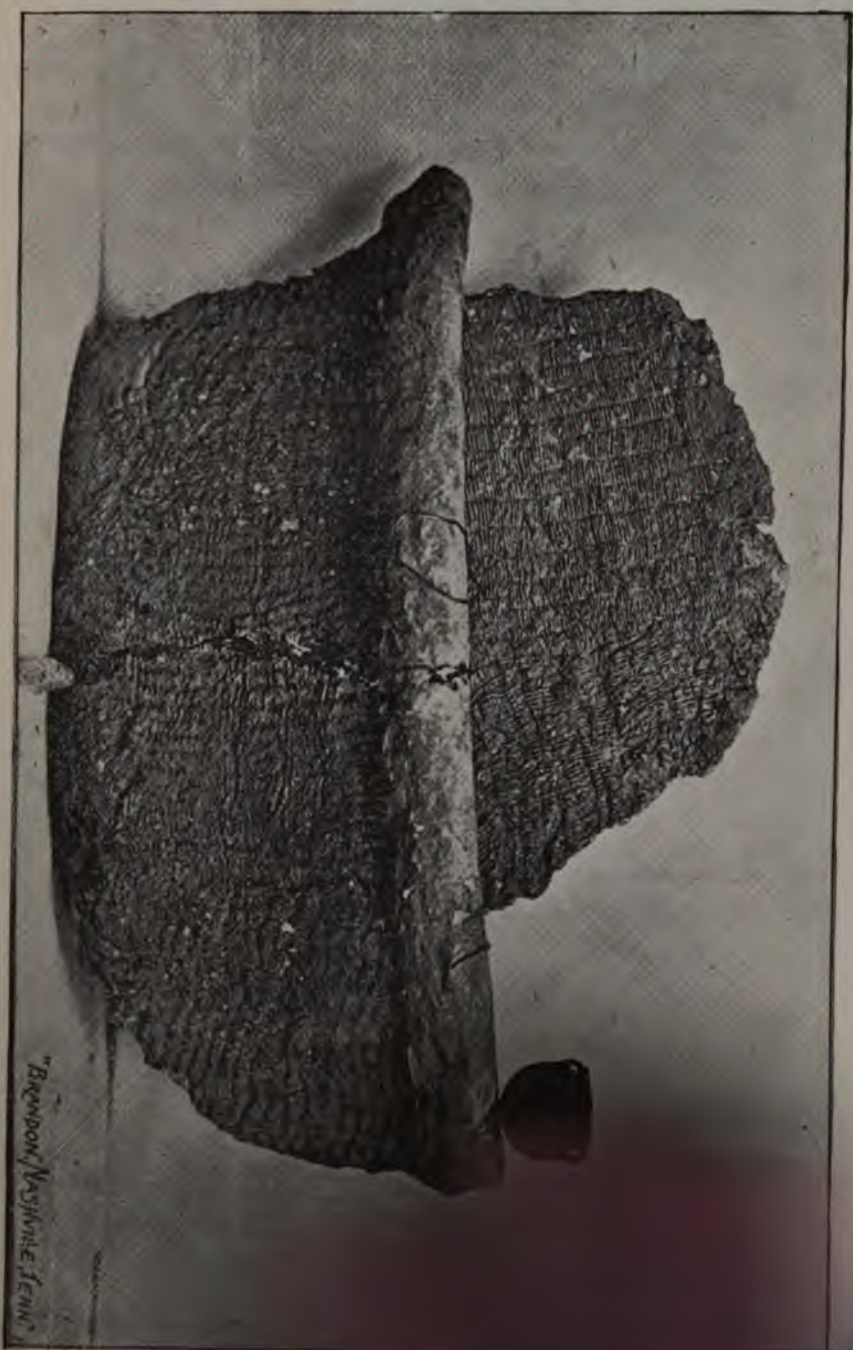
ments and specimens of earthenware have been obtained there. These large vessels, or "salt pans," were probably used in boiling the saline water of the spring, to make salt.‡

* Author's collection.

† Fourth Annual Report Bureau of Ethnology, pages 418, 422; *Archæology of Missouri*, Plate 23.

‡ The workmen, in excavating, had removed this large vessel a few yards from its original bed in the bank, a short time before the author reached the spot, so that

PLATE X.—Sections of a large vessel of pottery.



"BREMONT, NASHVILLE, TENN."



The early white settlers also manufactured salt there in considerable quantities. The vessels were rudely but strongly made, being sometimes an inch thick below the heavy rims. Pieces of coarsely pounded mussel shells, an inch long, are frequently mixed with the clay. As will be shown by the plate, the large earthenware pots or boilers were built up or molded in sacks or bags of fine matting or cloth, or of some woven fabric, that has left a lasting impression on the surface of the clay.

When the vessel was molded, it was probably left standing or was dried in the sun until it was hard enough to permit the removal of the cloth before burning. From the fineness and regularity of the imprints, some of these fabrics must have been skillfully woven. The variations of the thread also show that patched or separate pieces of the cloth were used to hold the sides of the vessels during the formative process. The large kettles were not all used as "salt pans," as we find many sections and fragments of them in other aboriginal cemeteries near Nashville. The graves are frequently lined and covered with them, instead of slabs of stone. They may have been used as sugar boilers, or cooking kettles, or for other purposes in the domestic economy of the Stone Grave race.*

We have accounts, however, of the use of clay vessels of the same character by the pottery making tribes of Southern Illinois and Missouri at other saline springs in these states.†

he was unable to ascertain exact details as to its position. Some bones and fragments of similar vessels were found with it. We are indebted to M. W. Woods, Esq., of the Sulphur Spring Company, for this fine specimen.

* Hunter, in his account of the modern tribes west of the Mississippi, says: "When these (pottery) vessels are large, as is the case of the manufacture of sugar, they are suspended by grapevines, which, wherever exposed to the fire, are constantly kept covered with moist clay. Sometimes, however, the rims are made strong, and project a little inwardly quite around the vessel, so as to admit of their being sustained by flattened pieces of wood, or by these projections, and extending across their centers."—*Hunter's Travels among the Indian Tribes, etc.*, page 296. Philadelphia, 1823.

† Colonel George E. Sellers, in his report on the saline springs of Illinois, reported, in 1859, the discovery of similar large earthenware vessels at a saline river, in Southern Illinois, a locality which he called "Salt Springs." "Sev.

The few large vessels discovered, as compared with the great number of small ones, was doubtless mainly due to the preservation of the latter as food and water vessels, in the graves; yet it also seems to indicate that in prehistoric times the food may have been prepared in the big family pot, after the communal fashion, and then divided in the small vessels to the many members of the household.

Fragments of pottery ware of various intermediate sizes are found in great abundance in the ancient burial grounds and settlements of Tennessee, but entire vessels are comparatively rare.

A fine large pot is illustrated in Fig. 64.

Its greatest diameter is eighteen inches. It is seventeen inches high, and has four strong handles. The rim and neck are ornamented with "finger-nail indentations." * In the collection of the Tennessee Historical Society, at Nashville, there is one almost identical in form and size, from a mound in East Tennessee. Mr. Otto Giers discovered in the Noel cemetery, near Nashville, a vessel eighteen inches in diameter in the form of an ordinary flat dinner

eral acres," Colonel Sellers states, "are covered with broken vessels, and heaps of clay and shells indicate that they were made on the spot. They presented the shape of semi-globular bowls with projecting rims, and measuring from thirty inches to four feet across the rim, the thickness varying from one-half to three-quarters of an inch. This earthenware had evidently been modeled in baskets. The impressions on the outside are very regular and really ornamental, proving that these aboriginal potters were also skillful basket makers."—*Smithsonian Reports*, 1866.

Brackenridge (*Views of Louisiana*, 1814) states: "The saline below St. Genevieve, Missouri, cleared out some time ago and deepened, was found to contain wagon-loads of earthenware, some fragments bespeaking vessels as large as a barrel, and proving that the salines had been worked before they were known to the whites." Du Pratz mentions a locality in Louisiana where the aborigines collected salt in earthen vessels made on the spot, before they had been supplied with kettles of metal by the French.—Du Pratz, Vol. I, page 307. And the Knight of Elvas also describes the method of making salt employed by the natives at the saline springs of Arkansas in De Soto's time (A. D. 1541).

* Fourth Annual Report Bureau of Ethnology, page 307. W
Major Powell for an electrotype of this fine illustration.

plate, a very unusual variety. It must have been a strong piece of ware to have done service in that form. The skeleton was resting upon it when found.

The stone grave cemeteries of Tennessee have yielded many other objects of pottery—pipes, trowels, implements, beads, paint cups, discs, totems, toys, amulets, and other articles—some of them unique and of much interest.



FIG. 64.—LARGE VESSEL OF POTTERY (HALE'S POINT, TENNESSEE).

Fig. 65 represents some of the clay trowels, or smoothers, used in molding and manufacturing vessels of pottery. They are often found with the large ware, and seem especially fitted for this purpose. In fact, it is difficult to assign them to any other duty. Their troweling surfaces are circular or sub-circular, unfitted for smoothing skins. They are curved, and the smaller trowels being the most numerous, they are used for smoothing the sides of the small vessels, and the larger ones for smoothing the curves

of the large vessels, boilers or salt-pans. The handles are evidently shaped to be held conveniently in the hand in molding. The illustration scarcely does justice to these interesting little implements.

A few years ago, two smoothing implements or discs of very hard pottery, with handles resembling flat-iron handles, were discovered in the large stone grave cemetery on White's creek, about five miles north of Nashville (the Byser cemetery). They were presented to the Tennessee Historical Society and are now in its collection.

Upon examining them, we supposed they might have been used for smoothing skins or some mechanical purposes. The larger one, about four inches in diameter, had too flat a surface to trowel,



FIG. 65.—POTTERY IMPLEMENTS—SMALL TROWELS.

or smooth the circular sides of even the largest vessels. Dr. Joseph Jones also found one, and described it as an implement "probably used for crushing parched corn and beans, or for dressing and smoothing hides."* But a short time since, however (January, 1890), old "Uncle Arthur," one of our exploring "experts," found five of these "smoothers" in one stone grave in a cemetery, adjoining or near the Noel cemetery, and on seeing them, we at once discovered their true character, or what we regard as their true character, and pronounced them *plastering trowels*.

The two largest, six inches in diameter and circular in form, have been already illustrated in the chapter upon the houses of the mound builders. Two of the smaller ones are shown in Fig. 66.

* Aboriginal Remains, page 143.

One has a flat oval smoothing surface, and is five and one-half inches long. The other is disc shaped, and about four inches in diameter.

These implements are evidently not suitable for pestles or corn-pounders, and the large ones are apparently too heavy for smoothing or dressing hides. We do not think we can be mistaken in their use. A class of implements entirely different in form were used in crushing corn, and will be illustrated hereafter.

From the well-known mortuary custom prevailing among the Indians, of burying their worldly treasures with the dead, it seems reasonably clear that these five implements were the tools or outfit of a plasterer whose remains were buried with them. The

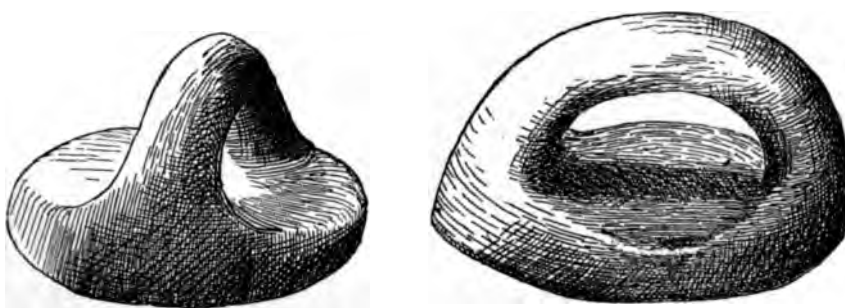


FIG. 66.—PLASTERING TROWELS (TWO-FIFTHS).*

clay of which they are made has a surface finish as hard as stone, yet some of them are considerably worn, showing that they were probably used upon a harder and more wearing material than hides or skins.†

We have no knowledge of the discovery of similar implements in other pottery districts. We, therefore, regard the information furnished by this set of old trowels as of much archaeological value. Tools of the same general character were doubtless used in building

* Author's collection.

† Upon examining these trowels closely, we find a hard, pressed, red clay adhering to the original smoothing surface of them, which offers additional evidence of their use in building.

or finishing the clay plastered, grouting, and adobe houses in Arkansas and other sections.

The little terra-cotta rattle, Fig. 67, was found by young Ormsby Johnson in the stone grave of a child near the Noel cemetery. It was well burned, but was slightly fractured in digging. The hard clay pellets found inside of it, and represented in the little

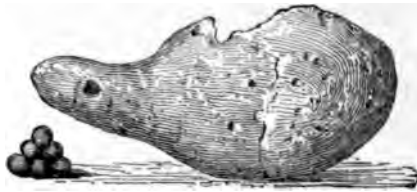


FIG. 67.—CHILD'S RATTLE FOUND NEAR NASHVILLE (ONE-HALF).

pyramid, may have quieted many an urchin in prehistoric days. There is a hole in the end for suspension. Similar rattles are found among the remains of ancient Mexico. Tylor, in his *Anahuac*, says: "The terra-cotta rattles in the Museum of Mexico are very characteristic. They have little balls in them, which shake about, and they puzzle us as much as the apple dumpling did King George, for we could not make out very easily how the balls got



FIG. 68.—THE MARBLES THEY PLAYED WITH (ONE-THIRD).*

inside. They were probably attached very slightly to the inside, and so baked, and then broken loose" †—a piece of scientific reasoning scarcely up to the standard of George III!

It seems the boys, or the men, probably, played marbles in prehistoric days, as thirteen well-burned marbles, or pottery balls, were

* Author's collection.

† Quoted by H. H. Bancroft.— *Native Races*, Vol. IV, page 557.

recently found lying together by W. W. Dosier, in a stone grave at Clees Ferry, a few miles west of Nashville. Some of them are illustrated in Fig. 68. We did not notice any "white alley" in the lot. It may have been won by some other fellow. Marbles or round balls of pottery and stone are frequently found in the graves, but so many have not been heretofore found together. If not used as marbles, they were probably some kind of gaming balls.

Fig. 69, representing a turtle, is not nearly so spirited as the terra-cotta original (Noel cemetery, author's collection).

This little object of rich brown ware was probably a totem or badge of an Indian family or gens. The turtle was a favorite fam-



FIG. 69.—TERRA COTTA TURTLE.

ily emblem among the modern Indians. It is found in their rude picture writings, and graven on pipes and shells. It is the model for some of the animal mounds of the north. The turtle was also a favorite animal figure among the ancient Mexicans. It is found among the pottery remains in the graves, and also in stone. In the National Museum of Mexico, there are "little stone turtles perfectly carved,"* and in the Smithsonian Institution there is a fine specimen, carved in stone, from New Mexico.†

The serpent totem, illustrated in Fig. 70, is rather rudely molded in blue grey clay. It is about two and a half inches in diameter. It was plowed up about nine miles north of Nashville and not far from the ancient works of Sumner, where

* Native Races (Bancroft), Vol. IV, pages 590, 600.

† Smithsonian Report, 1886, Part II, page 108.

scribed stone, with the double serpent emblem, was discovered. The head was broken by the plow, but has been restored. The serpent appears to have figured in the mythology of most of the native American tribes, nomadic and semi-civilized. Some of the great earth-works are built in its form. It is the figure very frequently found upon the shell gorgets from the graves and mounds of Tennessee. A very spirited antique in pottery from Mexico, representing a coiled serpent, may be seen in the collection of the Smithsonian Institution at Washington.*



FIG. 70.—A SERPENT TOTEM (TWO-THIRDS).†

II. H. Bancroft tells us that numberless little figures of animals in terra-cotta are to be seen in the museums of Mexico—birds, dogs, and serpents, and small idols of clay and stone, and that “many of these small images and figures were doubtless worn suspended round the neck or hung on the walls of houses, as several were pierced with holes for cords.” ‡

As will be observed, similar customs must have prevailed in ancient Tennessee, as a very large number of the small pottery objects, images, vessels, birds, animals, and totems are pierced with holes—an analogy of some significance.

Fig. 71 represents a little terra cotta bat, or some not very well

* Archaeological Collections (Rau), Smithsonian Institution, page 87.

† W. D. Buchanan collection.

‡ Native Races, Vol. IV, pages 545, 555.

identified animal (one-half); also, a little toy bird or amulet (actual size)

The little group (Fig. 72) represents a cunning little image of



FIG. 71.—SMALL TERRA COTTA FIGURES.*



FIG. 72.—EAR-RINGS AND IMAGES OR AMULETS.



FIG. 73.—TERRA COTTA RING OR EAR-RING.

fine terra cotta, well burnished, also, a grotesque head (one-half size) of well-

* Author's collection.

finished terra cotta ware. A larger ear-ring of well-glossed pottery is shown in Fig. 73 (author's collection). We have a number of these ear-rings with holes for hanging. They have a familiar appearance, and are not unlike the large metal rings worn in modern society. All are from the Noel cemetery, or from the stone graves of the Sumner county works, near Saundersville.

Two views of a small terra cotta wheel or ear-ring pendant, found in a stone grave in Stewart county, Tennessee, are shown in Fig. 74. This symmetrical ring is just two inches in diameter. It has been so carefully made of very fine ware that it must have been

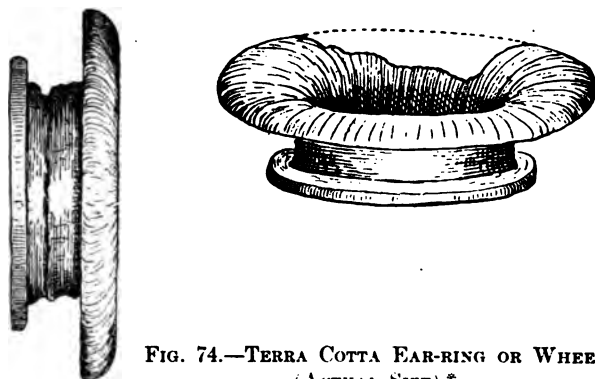


FIG. 74.—TERRA COTTA EAR-RING OR WHEEL
(ACTUAL SIZE).*

intended for some special purpose. It also bears the marks of use. Two of these rings, of the same size and form, were found in the same stone grave, in Stewart county, near the Cumberland river, and were placed in Miss Killebrew's collection, at Clarksville, Tennessee, where we first saw them. From the careful construction of the grave, it evidently contained the remains of some important personage, or at least of some one who was honored with a very respectful burial. Miss Killebrew subsequently presented one of the rings (the specimen illustrated) to Captain Johnson, who kindly gave it to the writer. Portions of the delicate rim were mottled with some substance resembling green paint; but it looked so foreign to the light colored surface of the ring that it did not then

* Author's collection.

occur to us that the green coloring might be copper. Subsequently, however, and since the terra-cotta ring was engraved for this volume, Mr. James Cox (January, 1890) discovered a very similar ring of stone, well plated with copper, in a stone grave within the group of ancient earth-works at Mound Bottom, on the Harpeth river, about twenty miles west of Nashville.

The stone ring was sent to us by Mr. Cox, and is illustrated in Fig. 75. It at once revealed the nature of the green coloring upon the pottery ring, which, upon closer inspection, proved to be frag-

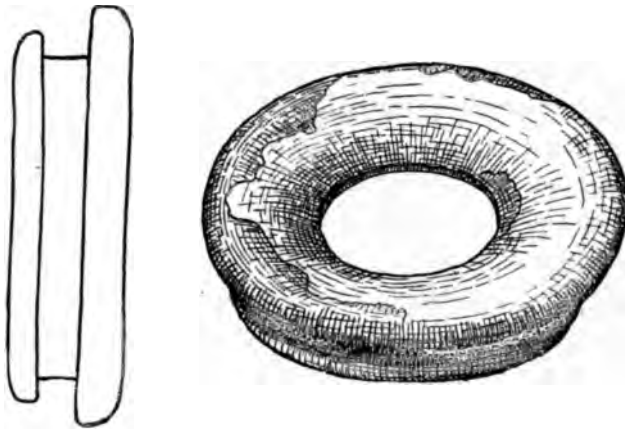


FIG. 75.—EAR-RING OR ORNAMENT OF STONE PLATED WITH COPPER.*

ments of copper plating. This remarkable stone ring is two and three-eighths inches in diameter, and is perfect in symmetry and finish. The projecting flange or rim has been entirely and most skillfully covered from center to circumference with a thin plating of hammered copper of uniform thickness, which laps around the outer edge as if melted into its place. The surface of the copper is now green with oxydation, but the plating is still nearly perfect, as is shown in the engraving. The copper is the malleable native ore from the old mines of Northern Michigan.

This is a suggestive little ring. It is difficult to realize that it was the work of an Indian even of the most advanced sedentary o

* Author's collection.

village type. It seems to represent the typical arts of the Toltecs or the Peruvians. Did we not know of the skill of the Navajos in silver and jewelry work, and of the north-west coast Indians in manipulating iron, and, indeed, of the general instinctive art faculty of the native American tribes, we would be disposed to attribute the art thus illustrated to some race superior to the North American Indian of the highest class. It seems, however, to be more consistent to regard such evidences of unusual mechanical skill, as representing occasional instances of individual excellence, or local development, among known tribes, rather than as the work of some superior and unknown race.

The uses of these rings or wheels we can only conjecture. They look something like little pulleys or mechanical appliances, but we must remember that they belonged to a period when personal ornaments were more used than mechanical inventions. Copper wheels, of somewhat similar form, found in the cemeteries and mounds of Ohio, have been pronounced ear-rings or personal ornaments by Prof. Putnam and other archæologists. A pair of them was found beside the skull in a grave, where ear-rings would be naturally placed. Mr. A. E. Douglass, of New York City, has in his fine collection of antiquities an ancient stone pipe, from Ohio, representing a human head, with ear-ring ornaments carved in the stone, circular in form, and nearly as large as these copper and copper-plated rings. It seems to confirm the view that these rings or wheels were pendants or ornaments for the ears.* The fact that two of them were found in the same grave in Stewart county also favors this view.† Very similar and equally symmetric "ear-ring pendants" of stone, will also be illustrated in the chapter upon ob-

* Our friend Mr. Douglass showed us this pipe, and kindly presented a photograph of it.

† A copper spool or wheel similar to the double copper rings found in Ohio was found by Dr. W. M. Clark in a stone grave a few miles south of Nashville, some years ago, and is illustrated in the Smithsonian Reports. Verrazzano, who visited the Atlantic coast of America in 1524, reported to his patron, the French king, that he found the natives using ear-rings and other ornaments of copper.—*Aboriginal Trade* (Rau), page 90.

jects of polished stone, and copper pendants or ear-rings like the copper spools or rings found in the Ohio mounds will be shown in the chapter upon copper remains. The ear-ring pendants are among the most remarkable antiques found among the ancient remains of the Ohio and Tennessee mound builders. Similar discs or rings will be seen carefully engraved as ear ornaments upon the human figures on the shell gorgets found in the ancient graves of Tennessee and Missouri. They frequently appear upon the figures in the Aztec pictures, and upon the idols of Mexico and Central



FIG. 76.—AN ANCIENT TERRA COTTA BOTTLE (TWO-THIRDS).

America. Beautiful ear pendant discs of copper or terra cotta, three or four inches in diameter, are also to be found among the antiquities of Peru. These large ear-ring ornaments seem to have been worn by all the southern and south-western peoples of ancient America.

A little jug or bottle of unusual interest is illustrated in Fig. 76. It was found in Stewart county, Tennessee, in a carefully built stone grave containing a very large skeleton. A fine clay image was also found in the grave, all indicating the burial of some important personage. The little jug is of light colored clay, but

is well burned and finished. The fairly-well executed head has holes at the sides for ear-rings, and one at the usual place at the back of the neck for a cord. A roll of curled or plaited hair hangs down behind. On the side of the bottle there is a carefully molded hole, as represented in the engraving. When laid in the grave it doubtless had a stopper, but the latter had probably decayed, as the hole was found to be plugged with the clay that had filtered into the grave.

When discovered, the bottle was nearly filled with dark round slate-colored pellets, about an eighth of an inch in diameter. We found one hundred and fifty-five of them, when we examined it. Dr. W. L. Dudley, professor of chemistry at Vanderbilt University, made a careful analysis of them. They were found to contain carbonate of lime, and a slight quantity of bituminous shale or clay. He reported that his analysis "failed to indicate the presence of any drugs or medicines;" also that "a careful microscopic examination did not reveal any cell structure, which therefore, excludes the presence of herbs and barks."

The latter may have disappeared by decay or absorption. These little pellets are soft, small, and wholly unlike those found in the pottery rattles and heads. They do not rattle when shaken. The modern Indians did not use medicine in the form of pills, yet, notwithstanding the absence of *herbs*, we are inclined to think this little terra cotta bottle of pellets may have been used by some priest or medicine man for some medicinal purposes, or with their decoctions, incantations, or curing ceremonies. Like the modern "Indian doctor," the ancient medicine man was probably "a fraud," and may have dosed his patients occasionally with "bread pills," without either herbs or drugs. In any case, it speaks well for him and his friends that they were willing that he should take his own medicine, on his way to the spirit-land. This little "medicine bottle" is in the collection of Miss Killebrew, of Clarksville, Tennessee, who kindly loaned it to the author to be examined and engraved.

Many other interesting objects in clay from the ancient graves

of Tennessee might be described and illustrated if time and opportunity permitted. It is, in fact, difficult to select the most useful illustrations from the vast store of available material. The native art in pottery is richer in details, and apparently more advanced, than any other branch of ancient industry. To properly estimate it, as an exponent of the culture *status* of the Stone Grave race, it must be surveyed as a whole, and must be considered, also, in its relations to other arts and industries. Races very low in the scale of civilization have occasionally developed an almost abnormal state of culture in particular arts. For purposes of comparison, we in-

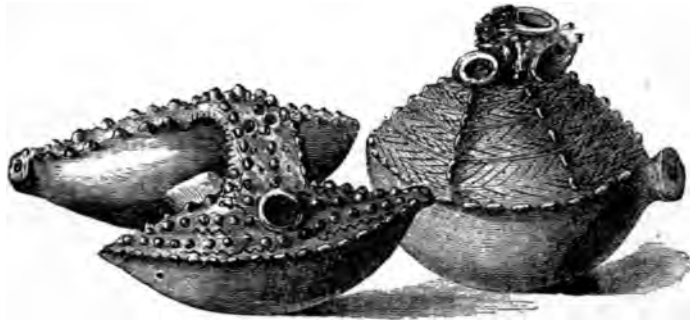


FIG. 77.—POTTERY OF THE FIJI ISLANDERS.

roduce an illustration from Dr. Wilson's *Prehistoric Man* (Vol. I, page 188), of the pottery of the savages of the Fiji Islands (Fig. 77).

The double vessel suggests an analogy to some of the peculiar Peruvian forms. Notwithstanding their low state of cannibalism, the Fijians excelled the other races of Polynesia in the ceramic arts, and in a certain subtle appreciation of beauty of form. They are artists by nature. The vessels illustrated seem equal, if not superior, to the best ancient types from Tennessee.*

Unfortunately, we have not as yet sufficient data to enable us to mark the lines of distinction that separate the historic from the

* "As examples of intuitive art, the pottery of the Fijians is superior in outline to the generality of decorated earthenware in civilized countries. They display a wonderful power of fertility and originality of design."—*Uncivilized Races* (J. C. Wood), Vol. II, page 920.

prehistoric ware of the Mississippi valley; yet we have no positive evidence of the existence within historic times of an art equal in excellence of manipulation and in its graces of form to the best examples from the stone graves. While this art is not believed to be beyond the natural capacity of some of the more advanced tribes of historic Indians of the Mississippi valley, under favorable conditions, some of its manifestations certainly indicate a culture unknown to the historic period, and somewhat in advance of our accepted ideas of red Indian art. It has many features in common with the pottery of the pueblo Indians, and in fixing its relative *status* in the scale of civilization, we think it may be justly classed in the same grade with the ceramic arts of tribes like the Zuni and Moqui villagers.*

* The discovery of the fine types of pottery and other antiques in the Noel cemetery excited much local interest upon this general subject, and nearly all the remaining stone graves in the immediate vicinity of Nashville have been excavated and examined. We have greatly regretted that a more systematic exploration of these old cemeteries has not been made, but there was no fund in the treasury of the Tennessee Historical Society for this purpose, and the archaeological field was too extensive to be controlled by individual effort. We have endeavored, however, to prevent indiscriminate ransacking and pillaging by inexperienced relic hunters, and we have urged upon all the duty of examining the graves with care and intelligence, with a view to preserving all objects and articles, however insignificant, in any way illustrating the industries and habits of these ancient tomb builders.

The writer personally superintended the exploration of a number of cemeteries. He also engaged the services of several "experts" in this work, from time to time, and thus acquired for his collection a large proportion of the fine specimens recently discovered, embracing some four or five hundred perfect vessels of pottery.

Messrs. John, Edward, and Robert Blunkall, Frank Lawrence, and "Uncle Arthur," who resided near the Noel cemetery, became very expert with the trowel, and found some of the finest specimens. Mr. Otto Giers, E. C. Wells, Frank Cheatham, Geo. T. Halley, W. W. Dosier, George Wood, and others were also enthusiastic explorers. There are a number of collections of pottery in Nashville from the graves and mounds of Middle Tennessee. The Historical Society has a large collection. Messrs. Otto Giers, E. C. Wells, W. D. Buchanan, Captain J. R. Johnson, Norman Farrell, Frank Morrow, Dr. R. A. Halley, Frank Cheatham, Vanderbilt University, Prof. Wright (of Fisk University), Miss Mary Maxwell, Mrs. J. P. Drouillard, Mrs. John Overton, and perhaps others, have collections or small

cabinets of ancient pottery. J. B. Nicklin of Chattanooga, Dr. J. F. Grant of Pulaski, The South-western University and Miss Killebrew of Clarksville, John G. Cisco of Jackson, and the Rev. C. F. Williams of Maury county, have some good specimens. One of the largest collections of Tennessee pottery is in the Peabody Museum, at Cambridge, Massachusetts. There are some fine specimens, also, in the Smithsonian Institution.

CHAPTER VI.

THE PIPES.

Tobacco in Ancient America—Pipes of Peace—Clay Pipes—Idol Pipes—Animal Forms—Bird Pipes—Tube Forms—Platform Pipes—Catlinite Pipes—Large Calumets—Flying Bird Types—Alligator Pipe—Square Form—Modern Catlinite Pipes—Iroquois Pipe—North-west Coast Types—Ancient and Modern Types Compared.

The tobacco plant, as is well known, is a native of America. The early discoverers reported that all the Indian tribes, savage and semi-civilized, knew of its uses; and archæologists have brought to light the fact that smoking was an almost universal and immemorial usage among the aboriginal inhabitants of our western continent—the ubiquitous pipe having been discovered in intimate association with its most ancient monuments.*

The pipe was invested with an interest and importance among the historic Indians, above the value of their other possessions. The time-honored calumet was sometimes looked upon with veneration by an entire tribe. It was present upon all ceremonial and religious occasions. Father Hennepin called it the "Pipe of Peace." It performed the duty of a flag of truce, and was his "safeguard" on his voyage of discovery.†

* Columbus and other discoverers not only report their astonishment at finding the natives "with fire-brands in their mouths and emitting smoke," but we have the authority of H. H. Bancroft for the statement that at the date of the Spanish conquest they smoked cigarettes and took snuff.—*Native Races*, Vol. II, page 288; Naidallac, page 160. Willow bark and the roots of herbs were also used by the Indians as substitutes for tobacco.

† "The Pipe such as I have described it," says Father Hennepin, "is a Pass and safe Conduct against all the Allies of the nation who has given it; and in all Embassies, the ambassadors carry that *Calumet* as the Symbol of Peace, which is always respected. For the savages are generally persuaded that a great misfortune would

Marquette and Charlevoix found the calumet equally useful as a symbol of peace and friendship. Longfellow begins his *Song of Hiawatha* with a beautiful tribute to it. The pipe was the favorite companion of its owner, and all the skill of the native lapidary was lavished upon it.

The prehistoric inhabitants of Tennessee were evidently inveterate smokers. In no other portion of America have ancient pipes been found in greater numbers or varieties, or of more artistic forms.*

The large stone calumets fashioned in the form of animals, many varieties of the finely modeled bird pipes, the "idol pipes" of human form, the ordinary forms in clay and stone, the disc pipes, the tube forms, the stone stem, curved base and platform types, of Ohio and West Virginia, have all been discovered in Tennessee.

It is not always possible to distinguish the ancient from the comparatively modern types, although the practiced eye of the old collector can generally do so. The pipe makers of some of the his-

befall 'em, if they violated the Public Faith of the *Calumet*. All their Enterprizes, Declarations of War, or Conclusions of Peace, as well as all the rest of their ceremonies are sealed if I may be permitted to say so, with the *Calumet*. They fill that pipe with the best tobacco they have, and then present to those with whom they have concluded any great Affair, and smook out of the same, after them. I had certainly perish'd in my voyage, had it not been for this Calumet or Pipe."—*A New Discovery*, etc., Chap. XXIV, pages 93, 94. London, 1688.

* The beautiful little animal-form pipes discovered in the mounds of the Scioto valley, in Ohio, and illustrated by Squier and Davis in the *Ancient Monuments of the Mississippi Valley*, are not surpassed in artistic execution by any ancient pipe work or carvings in stone discovered within the mound area. They are generally regarded as the best examples of ancient native art in stone. The high praise accorded them by Squier and Davis has, in fact, aided in creating the popular overestimate of the general state of art in the Ohio valley during the mound building epoch; yet, after a careful examination of some of the originals and of casts of the collection in the Smithsonian Institution, the author is of opinion that, as types of the mound builders' art, the fine Tennessee and southern pipes are not inferior to the Ohio mound pipes; neither are the fine pottery heads found in Tennessee inferior to them as examples of art in modeling.

toric tribes occasionally made pipes in excellence of carving and artistic merit not inferior to the genuine antiques. Adair informs us that the Cherokees made beautiful pipes of stone in imitation of birds and animals, and sometimes of "nude human figures" that could not "much be commended for their modesty."*

Lieutenant Timberlake, who visited the Cherokees in 1761, reports the additional fact that they made fine pipes of pottery ware. He says he was almost suffocated with the great number of peace pipes he had to smoke as a pledge of friendship.†

Captain John Smith, in his quaint "History of Virginia," described the stone pipes in which Powhattan and his wild courtiers smoke their tobacco—pipes like some of our antique western specimens, carved in the form of birds and animals, and, as Smith says, "heavy enough to beat out one's brains."

The large stone calumets and bird-shaped pipes sometimes discovered as "surface finds" are, therefore, not necessarily of ancient date, and may be the work of the Shawnees, Cherokees, or other modern Indians. It is, in fact, difficult to classify the various types chronologically or geographically, and we can only do so in a partial or general way.

The pipes discovered in the stone graves and burial mounds of Tennessee, of course, indicate with considerable exactness the typical forms used by the Stone Grave race. They also aid us in determining the age of antiques of similar forms plowed up in the fields.

Large funnel-shaped stem holes, sometimes even larger than the pipe bowls, appear to the author to have been one of the distinguishing characteristics of ancient southern clay and stone pipes, and we suggest to antiquarians the importance of this feature in the proper classification of these objects.

* History of the American Indians, pages 423. 424. London, 1775. According to Dr. Cyrus Thomas, Adair also states that the Cherokees made pipes that must have been of the same general form as some of the Ohio platform pipes.—Problem of the Ohio mounds, page 39.

† Memoirs, pages 38, 39. London, 1765.

The handsome slate and steatite platform pipes of the Ohio pattern found in Tennessee, with stone stems or mouth pieces, and with the small, carefully drilled stem holes, were also ancient types, certainly as old as some of the Ohio and West Virginia mounds, in which similar pipes have been occasionally found. The stem hole of *uniform diameter*, for a closely fitting reed or cane stem, probably belongs to type comparatively modern, as this appears to be the usual form of stem holes drilled by the historic Indians.

Steatite or talc, in its various colors, from North Carolina or the eastern borders of Tennessee, was the material generally utilized in the manufacture of fine stone pipes. No other stone was so suitable for this purpose. It is not injured by heat, and compact steatite is not easily fractured. It can be carved or drilled without very great labor, and some of the varieties have a surface nearly as brilliant as marble, when polished. Fine quarries of steatite are found near Roane Mountain, in East Tennessee. Sandstone, slate, limestone, serpentine, syenite, and other varieties of stone, were also employed in pipe making. In General Wilder's collection, there is a fine specimen made of rich banded jasper with brilliant red stripes. Any stone, attractive in its colors, convenient in form, or easily worked, seems to have been utilized by the old pipe makers.

The material was sometimes transported great distances. Indeed, it would be hard to tell the location of the various quarries and ledges that furnished the material for the pipes and implements of Tennessee and the states adjacent. Pipes were bartered and exchanged for other commodities. Doubtless, the pipe makers of East Tennessee and Western North Carolina, where much of the stone was quarried, exchanged them in large numbers with the shell workers of the coast, and the hunters and pottery makers of Middle and West Tennessee. Lawson tells us the southern Indians also manufactured tobacco pipes of *clay* to send to distant regions in exchange for skins and other merchandise.* In ante-Columbian times, as within the historic period, pipe making, like arrow

* Carolina (Lawson), page 207.

making, was doubtless a special industry, followed by experts in the art.*

We are told by the early writers that it sometimes took the native artisans many months to finish a single pipe. As most of the drudgery of living was borne by the women, time was plentiful, and, as Lawson says, the Indian men were "great enemies to profuse sweating," or hurrying in their work.

Fig. 78 represents the pipes of clay found in the stone graves near Nashville and in the lower Cumberland valley. (Author's collection.)

They are introduced here as typical forms, and will aid us in classifying other pipes. The outlines give a fairly correct idea of

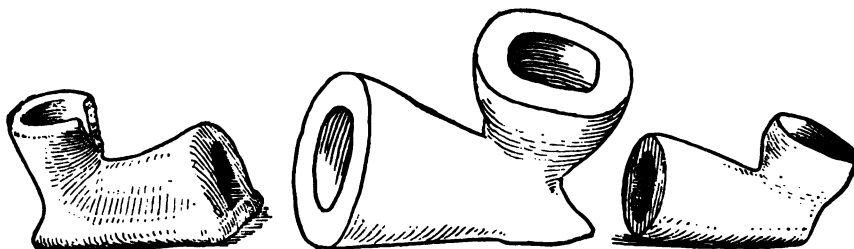


FIG. 78.—CLAY PIPES FROM THE STONE GRAVES OF TENNESSEE (ONE-THIRD).

the originals, but are stiff, and not so graceful as the natural objects. The large stem holes will be observed.

In the Johnson collection, there is a large clay pipe with a platform base, the stem hole of which is large enough to hold the entire bowl.

These clay pipes are of light yellow or blue-gray color, and are usually rudely made, as compared with the finer grades of pottery from the graves. The pipes of clay found in the burial mounds of Arkansas and Missouri are also usually rude, and show little effort at artistic molding. It seems singular that so little care was taken by

* Black marble pipes were made with great labor and patience by one person only throughout the whole nation. He lives in Natchez, and, being the only man that knows where the stone can be found, monopolizes the business entirely, and sells his common pipes at half the price of a blanket.—Schoolcraft, Vol. V, page 692.

the artistic potters of the Stone Grave race in making and ornamenting these easily molded pipes of clay, when so much labor was expended in carving the elaborate pipes of stone. The explanation may be in the fact that the women of our native races were usually the pottery makers, and the men the stone carvers and flint chippers.*

Ornamented pipes of clay are, however, occasionally found. A specimen, evidently of the stone grave period, from the character of the pottery, with the face of a wolf, dog, peccary, or some other animal, is shown in Fig. 79. It was found on the Rogers farm, at Little River, on the Lower Cumberland, in an ancient stone grave

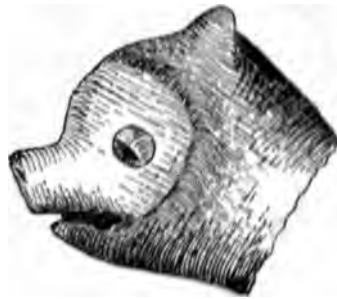


FIG. 79.—ANCIENT PIPE OF POTTERY (ONE-HALF).†

settlement. Unfortunately, the stem end was partly cut off, to enable the discoverer to use the pipe more conveniently with a modern wooden stem.

The great diversity in the forms of stone pipes, resulting from the individual fancies and tastes of the pipe-makers, renders it

* Lawson tells us the Indian women of Carolina were addicted to smoking as well as the men, and this was doubtless the case in other sections.

An ornamented clay pipe, with a face molded upon it, was recently found in a grave on the farm of Robert Chadwell, Esq., near Nashville. It was evidently a "commercial pipe," of the pattern sold by the early traders. The grave was probably that of a modern Indian, as large copper buttons and the remains of woven cloth were found in it. We are indebted to the kindness of Mr. Chadwell for the pipe and some of the buttons.

† Author's collection.

difficult to classify them in the order of their probable age. In considering this subject, we will, therefore, first present types of the stone pipes discovered in the stone graves and burial mounds, thus identifying them as types of the mound building tribes.

The pipe represented in Fig. 80 was dug up, in 1887, by Messrs. Winstead and Martin, in an ancient stone grave cemetery near the Cumberland river, on the farm of Mr. George P. Allen, about six miles south-west of Clarksville, Tennessee. It was found within the grave beside the head, having been placed there, doubtless, to be ready for smoking.



FIG. 80.—STONE PIPE OF SERPENTINE (ONE-HALF).*

The three legged vessel (Plate VIII) was found in nearly the same position in an adjoining grave. There was a large artificial mound, six feet high, on the "upper terrace" of the cultivated field containing the burial grounds, and the remains of pottery and shell heaps indicated the site of an ancient town or village. The pipe is of dark green serpentine, a beautiful semi-translucent mineral, finely polished. It represents the human figure and face. The bowl and large funnel-shaped stem hole are at the back of the figure. It stands well on its feet, but the face is shown best as engraved, the position in which it would naturally be held in smoking.

* Author's collection.

In the large burial ground, within the ancient earth-works near Lebanon, Tennessee, Prof. F. W. Putnam found the interesting pipe, carved from green steatite, represented by Fig. 81.

The tumulus contained "sixty stone graves arranged in the form of a hollow square, about the outer portion of the mound, in two or three irregular rows and in three tiers." The pipe was discovered between two of the graves, near the surface. We have not seen the original, but three sketches of different views of it appear



FIG. 81.—STEATITE PIPE, FROM WORKS NEAR LEBANON, TENNESSEE (THREE-FOURTHS).*

in Prof. Putnam's report,† from one of which the illustration was copied. The stem hole of the ancient funnel-shaped type is at the back of the figure, reaching through to the bowl in front. There are four small handles on the sides of the bowl.

By a singular coincidence, a pipe of the same material, of this identical peculiar form, and of about the same size, was found some two hundred miles south-east of the Lebanon works, in the great Etowah mound, near Cartersville, Georgia, one of the largest artificial mounds in the South, and the most remarkable in its physical characteristics, and in the richness and variety of the objects of

* Peabody Museum, Cambridge.

† Eleventh Annual Report Peabody Museum, page 350.

ancient art obtained from it. No other single mound or group of mounds north-east of Mexico has equaled it, and the adjacent smaller mounds, as treasure houses of aboriginal art, unless it be the earth-works at "Mound City," in the Scioto valley, where Dr. Davis, nearly a half century ago, struck the well-known archæological bonanza, consisting of nearly two hundred beautifully carved stone pipes.



FIG. 82.—STEATITE PIPE, FROM THE ETOWAH MOUND, GEORGIA (THREE-FOURTHS).*

The pipe from Georgia is represented in Fig. 82. It is of dark, rich green steatite, glistening with mica-like particles of talc, and is one of the finest specimens of ancient pipe carving discovered in the mounds. It is larger than Prof. Putnam's pipe. The outer rim of the funnel-shaped stem hole at the back is nearly as large as the bowl. The legs of the figures of both pipes are broken in nearly the same manner. The three views of Prof. Putnam's pipe show such uniformity in both that they appear to be the work of the same native sculptor.

* Author's collection.

The recent discovery of box-shaped stone cists in the mounds of the Etowah group by the agents of the Bureau of Ethnology also seems to indicate intercourse or relationship between the mound builders of North Georgia and those of the Cumberland valley.*

In this connection, we introduce another ancient stone pipe from the same great mound on the Etowah river (Fig. 83) as an illustration of the stone carving art of the old southern Indians. It



FIG. 83.—STEATITE PIPE, ETOWAH MOUND, GEORGIA (ONE-HALF).†

is of light gray steatite. The stem hole in the back is large and funnel-shaped. The abnormal, almost grotesque, Roman nose, presents another instance of the variety of face types in ancient southern stone carvings.

The two stone pipes from Georgia, now illustrated for the first time, are described from memory by Colonel C. C. Jones, the able historian and antiquarian of that state, in his work upon the An-

* Burial Mounds (Prof. Cyrus Thomas's Fifth Annual Report, Bureau of Ethnology, page 106).

† Author's collection.

tiquities of the Southern Indians, page 402. These pipes, "the best idol pipes we have seen," he states, "were ploughed up near the base of the pentagonal mound, within the inclosure formed by the moat, and the Etowah, upon the plantation of Colonel Lewis Tumlin, near Cartersville, Georgia." "They were obviously very old," he continues, "and, in all likelihood, antedated, by an indefinite period of time, the occupancy of this valley by the Cherokees. So far as recorded observation extends, nothing like them was noted in the use or possession of the modern Indians." In his valuable work, Colonel Jones figures no other pipes of equal interest or so skillfully wrought.*

For comparison, and in further illustration of the pipe carvings of the mound builders of the South, in the states adjacent to Tennessee, we present a unique stone pipe carved in imitation of the American panther; or some similar savage animal (Fig. 84). It was found in digging a ditch near the base of the large mound of the Carthage group on the Warrior river, near Tuscaloosa, Alabama. This is one of the largest and most interesting collections of ancient mounds in that state. The large Indian town once located there was probably visited by De Soto in 1540. The main mound is said to be about eighty feet high.† The panther, or puma, was the

* These two fine pipes from Georgia were kindly presented to the author, a number of years ago, by Mrs. J. C. Rice, of Nashville, and her daughter, Miss Ada Rice. Mrs. Rice was the daughter of Colonel Lewis Tumlin, of Bartow county, Georgia, the owner of the plantation upon which the Etowah mound group is located. She brought them to Nashville at the close of the war. The large stone idol now in the collection of the Tennessee Historical Society, and the remarkable copper-plate figures and engraved shells illustrated in the Fifth Annual Report of the Bureau of Ethnology, are from the same mound or mound group. Colonel Jones describes these pipes from recollection, stating that, unfortunately, "amid the devastations consequent upon the invasion of Georgia by the Federal armies, in 1864, these, with other valuable relics, were either destroyed or carried away by the soldiers." As will be observed, this was an error.

† This pipe is described in a printed address delivered by Thomas Maxwell, Esq., before the Alabama Historical Society, at Tuscaloosa, July 1, 1876. The author obtained it from Dr. W. H. Harris, of Louisville, Kentucky, to whom it had been presented by Mrs. Prince, the owner of the farm upon which the Carthage

totem or emblem of one of the families of the Creeks or Muskogees, a most warlike tribe of southern Indians, found by the whites in Alabama and Georgia at the period of discovery, and this fine pipe may have been intended to represent the family or clan of the panther. The wild cat was also a totem of the Chickasaws.

The pipe is carved from a heavy, compact, cream colored talcose stone, and, as shown in the engraving, is decorated with much artistic skill.

Unfortunately, the artist, in preparing the engraving, having



FIG. 84.—STONE PIPE, FROM CARTHAGE MOUND, ALABAMA (TWO-THIRD).*

only the photograph before him, failed to properly represent the feet and claws, which are as finely carved as the face.

The tail is curled up over the body, reaching to the back of the head. The stem hole is nearly as large as the bowl. The sharp angles about the eye appear in some of the Ohio animal pipe faces, and were, doubtless, intended to give fierceness to the expression. It is a most spirited example of ancient carving in stone, skillfully and artistically decorated. The ancient art work is fully up to the

group is located. A larger stone pipe, of an animal form, and many other objects of interest, have been obtained from these mounds. See *Ancient Native Mounds*, pages 161, 162, as to tiger or panther totem.

* Author's collection.

standard of the copyist, and was evidently the work of a master among the pipe sculptors of the mound epoch.

As may be observed, the scroll decorations and the angles about the eyes are similar to the decorations on the fine black pottery from Mississippi, illustrated in the preceding chapter, clearly identifying the age of this pipe with that of the best southern pottery.*



FIG. 85.—IMAGE PIPE (ONE-HALF).

The pipes heretofore illustrated were obtained from the ancient graves and mounds. The large stone pipe (Fig. 85), representing a kneeling human figure, is also an ancient type. It is in the fine collection of General J. T. Wilder, now of Johnson City, Tennessee,† and was discovered near Kingston, Tennessee.

* A clay pipe of the same general form, but of a ruder type, was plowed up on the Yazoo river, in Mississippi, and is illustrated in *Ancient Monuments* (Squier and Davis), page 193.

† General Wilder has one of the largest and most carefully selected collections of antiquities in the South, and kindly sent the author a large number of specimens for examination and comparison.

The material of which it is composed is a compact, reddish-brown stone, probably jasper or shale. It is six inches in height. The head-dress is unique and remarkable. The stem hole is large and funnel-shaped. The face is peculiar and somber in expression, but the high cheek bones and long nose seem to represent a red Indian type. The long pointed ear-rings on each side are well carved in the original. Prof. John A. Miller, of Oldtown, Tennessee, has a large stone pipe, found in the mound district near the Harpeth river, of the same general form, representing the human figure in a kneeling posture, but it is much more rudely sculptured. Pipes of somewhat similar form have also been discovered in Illinois, and in the ancient mounds of Ohio.



FIG. 86.—DUCK PIPE, SUMNER COUNTY, TENNESSEE. (SEETHIRD.)*

The pipe represented in Fig. 86 we regard as an ancient type. It seems to mark the transition state, or the beginnings of the pipe of the monitor bowl form. It was recently found on the farm adjoining the extensive earth-works in Sumner county, near Saundersville, Tennessee. The head is carved in imitation of a duck. It is of lustrous grey steatite, and has a comparatively large stem hole.

Fig. 87 illustrates a pipe in the form of the human foot, of the grey steatite. This also is probably an ancient type.

It was plowed up on the Phillips farm in the midst of the stone grave settlements, a few miles south of Nashville, and was kindly presented to the author by Colonel Thomas Claiborne.

* Author's collection.

Nashville. The bowl was unfortunately broken by the plow. The stem hole is large. The pipe is not of the ordinary monitor pattern, and is not large enough to be regarded as a calumet. In the chapter on pottery, a bottle or jug of the same general form, from a stone grave, is illustrated.

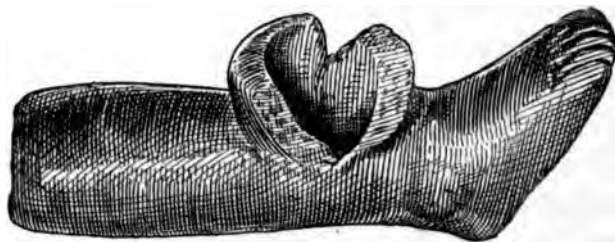


FIG. 87.—STONE PIPE, FOUND NEAR NASHVILLE (ONE-HALF).*

Among the most interesting antiques yet discovered in Tennessee are the tubes and tube pipes. Their form would not suggest to the ordinary observer that they were pipes, as they are unlike the smoking pipes generally used by the eastern Indians, and they seem quite unfitted for this purpose; yet the cylindrical tube or conoidal-shaped pipe is a well-known type, commonly used by the ancient

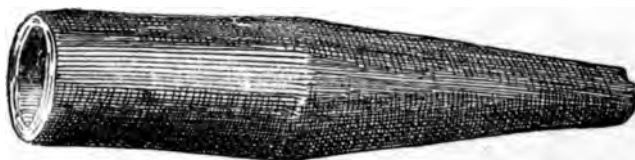


FIG. 88.—TUBE PIPE OF POTTERY.†

tribes of California. Some of the pueblo tribes, the cliff dwellers, and the Utes and Mohaves, also used pipes of this model.

Fig. 88 represents a tube pipe of pottery from the Harpeth mound section, in Williamson county (Middle Tennessee). It was presented many years ago to the Tennessee Historical Society, and is now in its collection. It is a dainty little tube, with thin walls,

* Author's collection.

† Tennessee Historical collection.

a trifle more than four inches long, and about an inch in diameter at the center. The aperture at the small end is less than a quarter of an inch in diameter. It bears the evidences of much use, but the reddish-brown clay paste, of which it is made, is of the finest quality of pottery found in the graves, and it is still glossy and firm. It looks very much like a modern cigar-holder. A small quill or hollow bone may have been used as a mouth-piece. This seems to have been a custom of some of the far west tribes.

The very symmetrical tube pipe of talcose slate (Fig. 89) was recently found in a stone grave in a small cemetery, in Overton county (Middle Tennessee), by H. L. Johnson. It is five and a half inches long, and an inch and a quarter in diameter at the large end. The bore tapers with remarkable regularity, and is but a sixth of

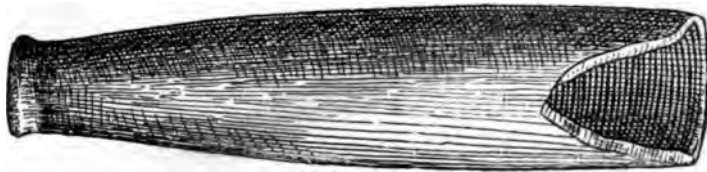


FIG. 89.—TUBE PIPE, OVERTON COUNTY.*

an inch in diameter at the mouth-piece. The pipe was evidently shaped before it was drilled, as the small aperture is not in the center of the mouth-piece, the drill having pierced the small end at one side near the outer rim. A rotary flint drill must have been used, probably with the aid of a bow and string, as a regular series of circular striæ made by the revolving drill point can plainly be seen opposite the fracture. Talcose slate is much harder than steatite, the stone generally used in making fine pipes. We have never seen a finer specimen of aboriginal mechanical work in stone. The old pipe maker who drilled and finished this tube must also have had considerable artistic taste, as the clean cut circular form, inside and out, is exact and perfect in symmetry.

* Author's collection.

Another illustrative specimen of the tube pipe form, found on the Watson farm, in Clay county (Middle Tennessee), is represented in Fig. 90. The pipe is carved from compact limestone, and is nearly seven inches in length, and about an inch and a half in diameter at the bowl end. It is broken on one side and unfinished, having probably been fractured in drilling and thrown aside. (The fracture is on the *other side*, and, to avoid confusion, is not shown in the illustration.) The dotted lines in the figure show the size of the bore, and indicate very plainly the method of drilling. The bore is about an inch in diameter; and the inside core, nearly a quarter of an inch high, and about a half inch in diameter, still remaining in the center of the bore, is plainly to be seen, especially from the fractured side, showing that a hollow cane or reed-drill,

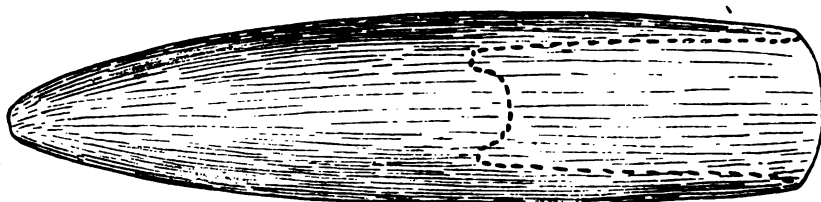


FIG. 90.—TUBE PIPE, CLAY COUNTY.*

with sand and water, was probably used in drilling. A hollow cane, three-fourths of an inch in diameter, would conveniently fit around the central core. We have seen no specimen showing so well how the old tubes must have been drilled. These two stone pipes give the collector considerable respect for the ancient mechanics of the Cumberland valley. Although not so artistic as some of the other pipe forms, they are as fine examples of mechanical skill.

The similarity of these tubular pipes to the well-known pipes used by the ancient tribes of California, and by the pueblo and cliff tribes, also gives additional interest to them.

Fig. 91 presents typical examples of the latter. Nos. 1 and 2

* Johnson collection.

are California tube pipes of stone.* No. 3 represents a Wolpi pueblo pipe.† And No. 4, a tube pipe of clay of the ancient cliff dwellers.‡ The pueblo type has been found both in stone and pottery. Curiously enough, the California tube pipes are usually made of steatite and talcose slate, the materials of which many of our Tennessee pipes are made. These tube pipes of the West, of this peculiar form, are ancient types from the graves—not now in use, a fact that adds interest to them and suggests that the tube pipes of Tennessee, or their forms, may have been derived in ancient times

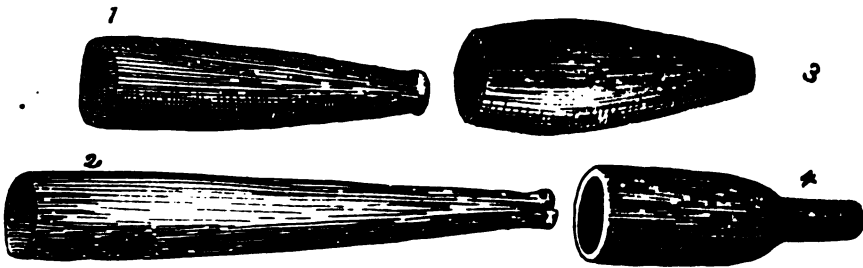


FIG. 91.—ANCIENT TUBE PIPES FROM CALIFORNIA—ANCIENT PUEBLO PIPE—CLIFF DWELLER'S PIPE.

from the California, pueblo, or cliff tribes, among whom they were once in very general use.||

The tube pipe seems an inconvenient form, but it must be re-

* Smithsonian Report, 1886, Part I, Plate XV.

† Second Annual Report Bureau of Ethnology, page 379.

‡ Prehistoric America (Nadaillac), page 256.

|| The stone stem pipes (of California, tube form) are taken from the old graves, and this kind are now no longer in use.—Otis T. Mason, in Smithsonian Report, 1886, Part I, page 219.

"The hollow tube pipes are not in use at the present time (in the pueblos), but are frequently found around the ruins and in possession of the Indians." James Stevenson, in Second Annual Report Bureau of Ethnology, page 378.

Dr. Cyrus Thomas, of the Bureau of Ethnology, in an argument based upon the distribution of pipe forms, states that, "The forms of pipes indicate that the mound builders were not connected with the Nahuatl, Maya, or pueblo tribes."—The Problem of the Ohio Mounds, page 39. The discovery of the tube pipes illustrated will correct this statement, so far as it relates to the pueblo tribes.

membered that the favorite sitting-place of the Indian was upon the floor, and he probably enjoyed his tube pipe in a reclining position.* A few tubes, or tube pipes, of a somewhat different form, have been occasionally discovered within the mound districts of the Ohio and Cumberland valleys. They have an almost uniform bore; and if pipes, were probably used with a separate mouth-piece of quill or hollow bone, as was the custom of the ancient tribes of California. These separate mouth-pieces are found still adhering to the tube pipes found in the graves there. It is by no means certain that they were used as pipes, but, for want of a better classification, they are generally called "tube pipes."

A very beautiful specimen of this form is illustrated in Fig. 92. We have seen no examples of aboriginal stone carving superior to



FIG. 92.—TUBE PIPE OF STEATITE (ONE-THIRD).†

it in symmetry of form or finish. The pipe is of dark gray steatite. Its length is about nine inches. At the larger end it is nearly two inches in diameter. It was found in excavating "King's mound," near Ashland, Kentucky, a large artificial mound of an ancient type. The pipe must therefore be regarded as probably an antique

* Mr. Paul Schumacher states that the Klamath Indians of California still use a tube pipe of steatite, and that it has amused him "to see them bending back their heads to bring the pipe in a vertical position, so as not to lose any tobacco."—Wheeler's Survey, Vol. VII, page 133.

† It is in the fine collection of A. E. Douglass, Esq., now in the Museum of Natural History of New York City. It has not been heretofore illustrated, excepting in the published transactions of a scientific society of Paris, France, from which, by the courtesy of Mr. Douglass, we obtained an engraved copy.

of the mound building period, and thus gives useful evidence of the probable age of similar types. Squier and Davis, in their valuable work, present an illustration of a tube or pipe of similar form, with a grotesque bird figure upon it.*



FIG. 93.—TUBE PIPE (ONE-THIRD).†

The pipe or tube of grey-green steatite represented in Fig. 93 is of the same typical form.‡

It is in a rude and unfinished state, the work of drilling the



FIG. 94.—PLATFORM BASE PIPE, AN OHIO TYPE (ONE-HALF).||

hole through the cylinder being also incomplete, but it gives a correct idea of the general form of these objects.

Other and somewhat similar cylindrical tubes or “telescopes,”

* Ancient Monuments of Mississippi Valley, page 225.

† Faller collection, Nashville.

‡ Mr. Faller died some years since, and left no information regarding this pipe, excepting that it was from Tennessee.

|| Collection of Dr. Thomas Black, of McMinnville.

with a uniform bore, will be considered in the chapter upon smooth stone implements.

A beautiful specimen of the "stone stem pipe," with flat or platform base slightly curved, is shown in Fig. 94. It was found near Short Mountain, Warren county, Middle Tennessee. One of the same general form (Fig. 95), unfortunately imperfect, was recently found near the ancient cemetery, on the Noel farm, south of Nashville. They are of rich black steatite, with a glossy, lustrous surface. Dr. J. F. Grant, of Pulaski, Tennessee, south of



FIG. 95.—STEATITE PIPE, NASHVILLE, TENNESSEE (ONE-HALF).*

Nashville, has a specimen in his collection of the same form, from that section.

The stem holes are but about a sixth of an inch in diameter—some of them even smaller—and have been drilled with delicate precision. These small stem holes and stone mouth-pieces are characteristics of the fine platform curved base, and animal-form pipes, discovered in the elaborate mounds of the Scioto valley in Ohio. The latter mark the period of the highest development in the art of stone carving reached by the mound builders of the Mississippi valley. It must have required much skill and practice to enable the old pipe makers to execute this fine work with the primitive tools at their disposal. A fine needle of wood

* Author's collection.

possibly a needle or drill of bone or hammered copper, may have been used for this purpose. With the aid of sand and water, and with a bow and string to cause the needle to revolve, these delicate perforations might have been made, by an expert artisan, blessed with a plentiful store of patience.

The beautiful stone stem pipe from Geddes Island, on the Tennessee river (Fig. 96), has one of these small, carefully drilled stem holes, about eight inches long. It is a marvel of artistic work in this line. The stem is flat, thin, and tapering, like some of the finest platform pipes of Ohio. Its symmetrical form is not well represented in the engraving.

Platform pipes with stone stems were not common in ancient Tennessee, as but few of them have been found, but the presence



FIG. 96.—PIPE FROM EAST TENNESSEE (ONE-THIRD).*

here of these typical forms indicates intercourse or commercial relations with the ancient inhabitants of the Ohio valley and the North-east.

A few pipes of this type have been found as far to the eastward as New England. The general distribution of the various forms of pipes is another illustration of the extent of intercourse and communication during the prehistoric period between the widely separated tribes of North America. The presence of the platform pipes of the Ohio type in Middle Tennessee seems to confirm the traditions of the northern Indians that the people of the Ohio valley, when forced from their homes, found their way eastward.

The pipe shown in Fig. 96, is of the same shape or

* General J. T. Wilder's collection.

hawk, was plowed up on the farm of Mr. R. C. Phillips, near Hillsboro, Coffee county, Tennessee. It is of light gray steatite, and is of an unusual form, the stem hole being large and in the front or breast of the bird.

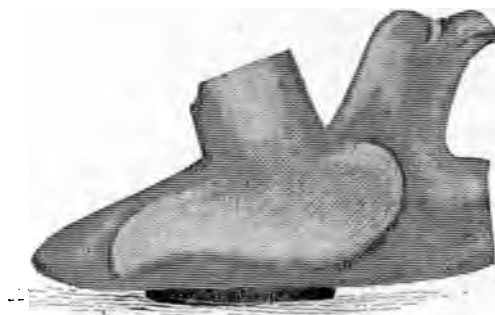


FIG. 97.—PIPE FROM COFFEE COUNTY, TENNESSEE (ONE-THIRD).

A much finer pipe of dark gray steatite, modeled in the form of a duck or some web-footed bird, with a large funnel-shaped stem hole in the breast in front, is represented in Fig. 98. It is eight



FIG. 98.—DUCK PIPE (ONE-THIRD).*

and one-fourth inches long, and is one of the best and most elaborate pieces of carving we have seen. It weighs three and one-fourth pounds. We do not know of a duck or bird having a bill of this form. Some variety of water-fowl was, doubtless, in the mind

* Author's collection.

of the pipe maker, as the feet are webbed. We have a pottery duck or bird head from one of the stone grave cemeteries with a similar blunt bill. This fine pipe was found in Etowah county, Alabama, one of the northern counties of the state, near Attalla, in 1885 (on the Smith farm, near Walnut Grove).

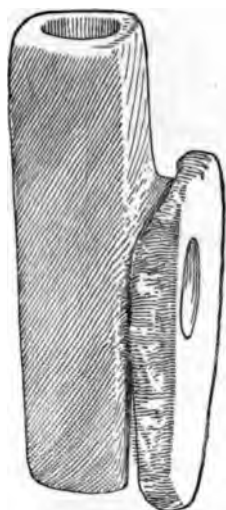


FIG. 99.—PIPE OF CATLINITE, NOEL CEMETERY, NASHVILLE (FOUR-FIFTHS).*

The broken pipe illustrated in Fig. 99 has an interesting history. It was carved in bright red catlinite from the pipe stone ledge of Western Minnesota, and still has the brilliant jasper-colored surface characteristic of that stone. It was found in exploring the stone grave cemetery of the Noel farm near Nashville. We were unable to ascertain with certainty whether it was found within a grave or in the adjacent earth, although we obtained it from George Wood, one of our employes, on the day he discovered it.

The bowl is perfect, but the large, thin, circular disc that originally surrounded the funnel-shaped stem hole is broken, and but a small portion of it remains. This pattern of pipes, although rare, is well known to archæologists.

* Author's collection.

The beautiful disc pipe, found in Kentucky (Fig. 100), shows the form of the original disc that belonged to our Tennessee pipe. It is about three inches in diameter. This was probably the fashionable smoking pipe of its day in certain sections. The disc was doubtless a mere conceit, used as an ornamental handle by the Indian dandies of the time.*

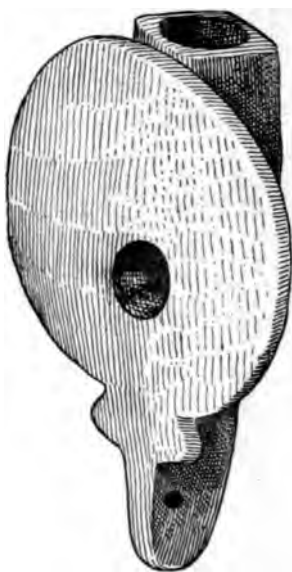


FIG. 100.—CATLINITE PIPE, KENTUCKY (TWO-THIRDS).

So far as we are informed, the pipe illustrated in Fig. 99 is the only specimen of ancient red pipe stone or catlinite yet discovered in Tennessee. When Longfellow in his *Song of Hiawatha* tells us that the dusky sons of the forest came from afar, even "*from the groves of Tuscaloosa*" to the quarries of Western Minnesota for this beautiful pipe stone, his imagination was probably responsible for the expression, but the discovery of a catlinite pipe in an

* Fig. 100 was copied from an engraving of the Kentucky disc pipe in "Prehistoric Remains of Kentucky," Geological Survey of Kentucky (Carr and Shaler), Plate VI. It belongs to the collection of R. S. Munford, of Rowlett's Station, Kentucky.

ancient Tennessee cemetery, not far from the domain of the old Alabama chief, Tuscaloosa, in part, at least, verifies the poet's statement.



FIG. 101.—DISC PIPE, EAST TENNESSEE (THREE-FOURTHS).*

A pipe of the same general form (Fig. 101), of oolitic limestone, was found near Chattanooga, Tennessee.†

We now come to a class of pipes of somewhat doubtful antiquity—the large stone calumets. Their unusual size, peculiar

* General Wilder's collection.

† These disc pipes, both in catlinite and other stones, although rare, seem to have been widely distributed. Two or three of them have been found in Canada (see Report of the Canadian Institute, pages 29, 27. Toronto 1867-8), and we noticed in the collection of Mr. A. E. Douglass, at the Museum of Natural History in New York, a half-dozen very fine specimens of such pipes. The center portion of Missouri (Boone, Saline, and Chariton) has been supposed by some writers to have been the original center, where the stems were made; but I doubt if it may have been the original center, which was afterwards abandoned. The stem holes, although small, are fitted with a plug of wood, as in those of an old type.

forms, and the uses to which they have been applied as "pipes of peace," and objects of tribal veneration, lend special interest to their history. They are usually in the form of birds and animals. Some of them are prehistoric, and probably of great age; others are of comparatively modern date. As heretofore stated, the early discoverers report that most of the tribes of historic Indians manufactured and used them. Even the Indians of Virginia, east of the Alleghany Mountains, whose arts were more primitive than arts of the tribes within the mound districts, used these large pipes. The Cherokees and other tribes of Tennessee and the



FIG. 102.—DUCK PIPE, SMITH COUNTY (ONE-FOURTH).*

Carolinas manufactured them; therefore, unless found in the mounds or stone graves, they may be of comparatively recent date.

One of the finest specimens of this form, a gray steatite pipe from Smith county, Tennessee, is in the collection of the Tennessee Historical Society (Fig. 102.) It is sixteen inches long, and weighs nearly six pounds.



FIG. 103.—BIRD PIPE, WARREN COUNTY (ONE-FOURTH).†

As Captain Smith said of the old Virginia pipes, it is plenty "large enough to beat out one's brains." The Tennessee Historical Society has another fine pipe, in form and size almost a duplicate of the one illustrated.

* Tennessee Historical Society collection.

† Terry collection.

The duck was a favorite model of the old pipe carvers and pottery makers of Tennessee. It was a totem or emblem of some of the modern tribes.

In the fine collection of Mr. James Terry, now in the Museum of Natural History in New York City, there is a large bird pipe or calumet, plowed up on the Patterson farm near McMinnville, Tennessee, of the same general form as Fig. 102, but with the long beak



FIG. 104.—FLYING BIRD PIPE, ANDERSON COUNTY (ONE-FOURTH).*

of the toucan or some southern bird † (Fig. 103). The beak is also somewhat like that of the wild turkey and other home birds. The pipe is sixteen inches long, is carved from green steatite, and is finely polished.

In the Terry collection there is also a fine steatite pipe, thirteen and a quarter inches long, of the flying bird pattern, from Clinch river, Anderson county, Tennessee (Fig. 104).



FIG. 105.—ANOTHER VIEW OF SAME PIPE.

The illustration shows its form quite correctly. Another view,

* Terry collection.

† Mr. Terry suggests that the bird represented is the "cava cava; habitat, Texas, Florida, and California."

showing the bowl and extended wings, is presented in Fig. 105. In the Douglass collection, now in the same museum in Central

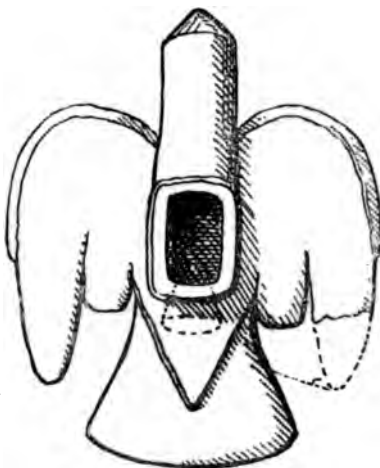


FIG. 106.—FLYING BIRD PIPE (ONE-THIRD).*

Park, New York, there is a flying bird pipe, of talcose schist, of the same general form, from Polk county, Tennessee.

The fine flying bird pipe represented in outlines in Fig. 106, is also in the Douglass collection, and is the most perfect specimen of this pattern we have seen. It was carved from green steatite, and was discovered in Northern Georgia. A similar pipe of steatite, with widely extended wings, and as well carved, was found in Smith county, Middle Tennessee, and is in the collection of Mr. W. E. Myer, of Carthage, but unfortunately it is badly broken.

Fig 107 presents another type of these large calumets. It weighs over five pounds, and is carved from finely colored gray-green steatite, in imitation probably of the head of a wolf or fox. We noticed it years ago performing humble service in holding back the heavy front door at the fine mansion of the Rev. A. L. P. Green, D.D., near Nashville. Dr. Green reported that it was plowed up at an early period in Maury county, Tennessee.†

* Douglass collection

† Mrs. Thomas D. Fite, of Nashville, daughter of Dr. Green, kindly presented

Fig. 108 is a fine representation of a bird pipe of gray-green steatite, of the monitor bowl form. It is so symmetrical in its outlines, that it must have been carved by the hand of a master among



FIG. 107.—STONE PIPE, MAURY COUNTY (ONE-FOURTH).*

the old pipe makers. For a half century or more it has been in the Jackson collection, at the Hermitage, and is regarded by the Jackson family as a Middle Tennessee pipe, but its label and exact history have been lost.†



FIG. 108.—STONE PIPE (ONE-FOURTH).‡

The stone pipe of bird form, with the large monitor bowl (Fig. this fine pipe to the author. A pipe with nearly the same head and general form was found in one of the ancient mounds of the Scioto valley, near Chillicothe, Ohio.—Ancient Monuments of the Mississippi Valley, page 258.

* Author's collection.

† It may not be generally known that President Andrew Jackson, at the Hermitage, had a most interesting cabinet of relics. It embraced of fine stone pipes, ancient medals and coins, old china, and many antique historical and antiquarian interest. They are now the property of the Memorial Association. Colonel Andrew Jackson, of the Hermitage, lent us this pipe and other relics, to be photographed and engraved.

‡ Hermitage collection.

109), was plowed up many years ago on the old Donelson farm, adjoining the Hermitage farm of President Jackson. It is of light-gray steatite, and is the property of Captain Alexander Donelson.

The pipe with the wolf or fox head (Fig. 110), is in the collection of the Columbia Institute, at Columbia, Tennessee. It is of



FIG. 109.—BIRD PIPE, DAVIDSON COUNTY (ONE-THIRD).

dark, rich, well-polished steatite, as we remember it, and was found in Hickman county, Tennessee.

These finely carved stone calumets in the form of birds and animals must have been very numerous in ancient Tennessee, both in the middle and eastern sections of the state. A great number of them have been discovered; more of the large pipes, indeed, than have probably been found in any other state.

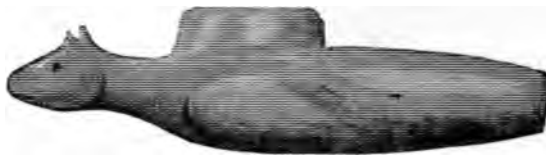


FIG. 110.—STONE PIPE, HICKMAN COUNTY (ONE-FOURTH).*

Dr. Joseph Jones has illustrations of two very fine specimens in his work. The Tennessee Historical Society has a half dozen of them. There are some of them in the Smithsonian Institution, and in the Douglass and Terry collections in the Museum of Natural History in New York City (not illustrated). General

* Columbia Institute collection.

Wilder, Bishop Quintard, Warren K. Moorehead, Dr. Black, Captain Johnson, Dr. Duncan Eve, and other collectors, have fine specimens, but our time has been so limited that we have not been able to present illustrations of them.



FIG. 111.—BIRD PIPE, MAURY COUNTY (ONE-THIRD).

Fig. 111 is a spirited illustration of an ancient pipe in the fine collection of the Rev. C. Foster Williams, of Maury county, Tennessee. It is of blue gray stone, and was found in that county. At the bottom of the bowl, there is a small, carefully drilled hole, evidently made for the purpose of draining or cleaning it. We know of no other ancient pipe having this peculiarity.

The beautiful pipe carved in imitation of an alligator, Fig. 112,

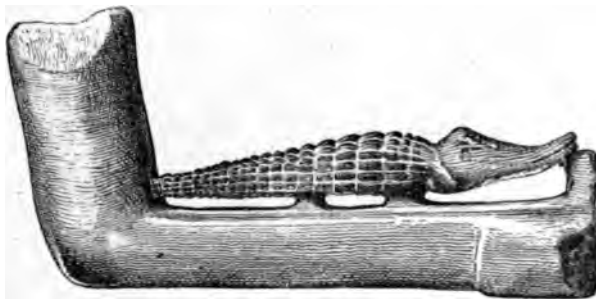


FIG. 112.—STONE PIPE, DAVIDSON COUNTY (TWO-THIRDS).

is in the collection of Dr. John B. Lillard, formerly of Nashville. It was plowed up on the Bradford farm, in the midst of the stone grave cemeteries, a few miles south of Nashville, a number of years

ago. It has been carved from slate or shale—is finely polished, and is one of the most artistic pieces of carving in stone yet discovered. In our opinion, it equals the best types of art in pipe carving found in the Ohio valley or Iowa. The material of which it is made is much harder than the steatite usually used in the manufacture of the fine Ohio pipes.

The stem hole is comparatively small, and of uniform diameter, like the stem holes of the pipes of the historic tribes and of the early French traders. We do not, therefore, regard this pipe as a very ancient type, but it is a genuine antique of much interest. Pipes in imitation of alligators were found by Squier and Davis in the Scioto mounds. They corroborate the many other evidences of ancient intercourse between the mound building tribes of Ohio and the tribes of the far South. The alligator was a totem or family emblem of both the Creeks and the Chickasaws, and probably of other southern tribes.*

We have presented illustrations of some of the fine stone pipes discovered in Tennessee and the states adjacent, and have endeavored to classify them in part in the order of their probable age.

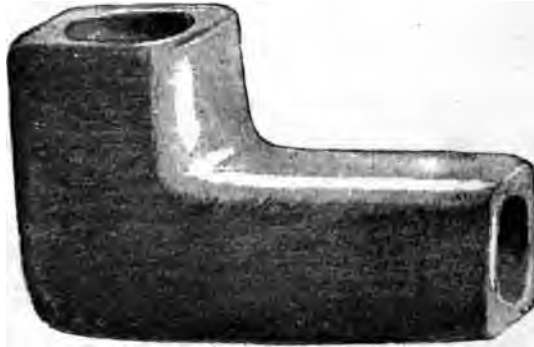


FIG. 113.—STONE PIPE, SUMNER COUNTY, TENNESSEE (TWO-FIFTHS).†

In considering this subject, some attention should be given to the more familiar plain, square, and round bowl pipes, quite com-

* Ancient Society (Morgan), pages 161, 163.

† Author's collection.

mon in this general section. They do not differ materially from the ordinary types found elsewhere in the Mississippi valley. Expert collectors can usually distinguish the very old pipes from comparatively modern specimens by their large funnel-shaped stem holes and other peculiarities.

Fig. 113 represents an ancient pipe of the familiar square form. Several varieties of this type and of the round bowl form may be found in the Historical Society's collection and in the author's collection. The same pattern may be observed in the pictograph on stone of the group of mound builders (Plate II). In investigating the arts of the ancient pipe makers, and thereby endeavoring to ascertain the status of the prehistoric tribes in the scale of civilization, we have for many years carefully observed the work of the pipe makers among the historic tribes. We have patiently watched the Dakota Indians when they were engaged in carving and polishing their fine catlinite pipes, generally with the aid of no better tools than common pocket knives. The art of pipe carving was one of the few prehistoric Indian arts that remained after the advent of the Europeans, and after the art of making pottery and flint implements had been forgotten.

For purposes of comparison, we have collected specimens of the pipes of the Cherokees, and of a number of modern tribes, and have arranged them upon a shelf in our cabinet beside the antique types. Contact with the whites and with European art has, of course, had its influence upon the carving of the historic Indians.

The theory that the mound building tribes belonged to a distinct and superior race, and that their arts and industries were very much in advance of the historic tribes, we think can not be established by comparing the ancient with the modern pipes, as some of the latter equal the best specimens of pipe carvings discovered in the mounds.

The series of both types show the art instinct or natural appreciation of art among the native tribes, and add to the many other indications of the homogeneous character of the red Indian race.

To enable our readers to compare the various carvings, we present a number of illustrative specimens of modern or comparatively modern pipes.

Fig. 114 is a poor illustration of a beautiful pipe of brilliant red

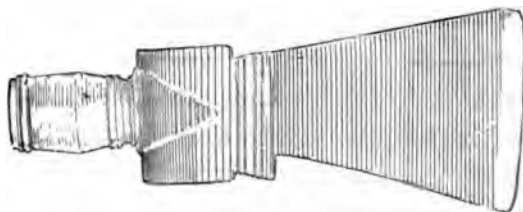


FIG. 114.—A DAKOTA PIPE (TWO-FIFTHS).*

catlinite, carved in the form of a hatchet. We obtained it years ago in Dakota Territory, from a Sioux chief, who made it. It is

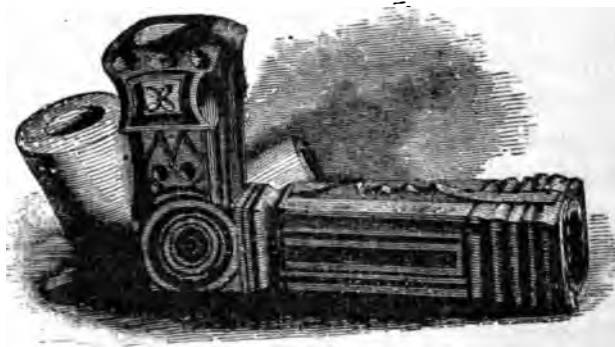


FIG. 115.—PIPES OF A MODERN CHIEF.†

as symmetrical and as highly polished as if made by a skillful, educated lapidary.

* Author's collection.

† From Ancient Monuments of the Mississippi Valley, page 230. In the Smithsonian Report of 1885, Part II, page 410, many of the fine catlinite pipes of the Mandans and other tribes are well illustrated. Several of them are carved in the form of men and animals.

Specimens of the work of the modern Indians in red pipe stone are also shown in Fig. 115. The finely carved pipe was used by the famous and eloquent Indian chief, Keokuk, of the Sacs and Foxes



FIG. 116.—A CHINOOK PIPE (TWO-THIRDS).*

of the North-west. We have a number of Sioux pipes of the same general form, some of them artistically inlaid with lead. The authors of the Ancient Monuments of the Mississippi Valley, expressed



FIG. 117.—AN IROQUOIS PIPE (ACTUAL SIZE).

the opinion that pipes of this class do not show the high order of art displayed in the pipe sculptures of birds and animals discovered by

* Author's collection.

them in the Scioto mounds. This may be in part true. We have, however, in our collection, a bird pipe (Fig. 116), carved by a Chinook Indian, which, as a specimen of carving in stone, equals in artistic execution and delicacy of finish, some of the best ancient types of Ohio. It is about the size of the Ohio pipes, and was carved from rich, dark-green steatite. The Chinooks or Flat-heads, of the Columbia river, were a fishing tribe of low grade in the scale of civilization.*

The Iroquois pipe (Fig. 117) was dug in an old Iroquois cemetery in New York, in 1888, by Mr. W. W. Adams, of Mapleton, New York. It is a fine specimen of the clay pipes manufactured within the historic period by the Indians of that tribe, and belongs to a well-known Iroquois type.†

Fig. 118 is a fine example of the stone carvings of the Haidah Indians of the north-west coast of America. It is a pipe of black slate, brilliantly polished. In skill and delicacy of execution, and in



FIG. 118.—SLATE PIPE, NORTH-WEST COAST INDIANS (TWO-FIFTHS).‡

its general appearance, it resembles the fine jade carvings of the Chinese and Japanese, indicating the probable ancient Asiatic origin of this art faculty. It belongs to the Jackson collection at the Hermitage, and was doubtless presented many years ago to

* This fine pipe was presented by the Chinook Indian who made it to Colonel Thomas Claiborne, of Nashville, in 1850, when he was stationed in Oregon as an officer of the United States army. Colonel Claiborne kindly added it to our collection.

† Mr. Adams kindly sent us the electrotype for this engraving.

‡ Hermitage collection, Nashville.

President Jackson. The small stem hole runs through the elaborate network of figures to the bowl. We have a carved slate pipe made by the Thlinkets, a neighboring tribe of the north-west coast, nearly equaling it in artistic execution.

These Indians, the Haidas, Thlinkets, and other tribes, were probably less civilized than some of the historic Indians of the early frontier. They lived in rude huts in a semi-savage state, yet in some of the arts, especially in wood and stone carvings, they excel all other tribes of North American Indians. Some of their pipe carvings, we think, surpass the best examples of this art yet discovered in the mounds of the Mississippi valley. The fine typical pipes of the mound builders illustrate the culture of the most advanced tribes of North American Indians at the period of their highest development. They are sometimes remarkable examples of individual skill, but they can not be regarded as representing a different or superior race.

CHAPTER VII.

CHIPPED STONE IMPLEMENTS.

The Stone Age—The Flint Chippers of Tennessee—The Arrow Makers—The Agricultural and Mechanical Implements—The Axes—The Adze Forms—The Small Tools—The Chisels—Cutting Knives—The Daggers—Double-barbed Spears—The Long Knives, Swords, and Spears—The Large Ceremonials—The Chipped Stone Scepters—The Unique Implements and Family Totems—The Crawfish Totem—The System of Totems—The Turtle Totems—Disc Forms.

The bronze and iron ages in the history of the early inhabitants of Europe, were unknown in ancient America. There was a limited knowledge of smelting and of the uses of bronze and copper among the Toltecs, Aztecs, and the old Peruvians, and of the malleability of native copper among the ruder tribes, but the uses of iron were unknown even to Mexican and Peruvian civilization. The ancient Scandinavians, the Lake Dwellers of Switzerland, and other primitive inhabitants of Central Europe, learned at a remote period to smelt metals in rude furnaces; a knowledge possibly borrowed from Phœnicia or the East: and several of the savage tribes of Africa knew something of the smelting and the welding arts, perhaps from contact with the early civilization upon the lower Nile; but the natives of the isolated double continent of America were slow to acquire a knowledge of the arts of metallurgy, especially of the more difficult processes of utilizing the ores of iron; and north of Mexico the stone age continued down to the period of European settlements.

With the advent of the whites, the weapons, implements, and tools of stone disappeared from use, almost immediately and entirely. We, therefore, have little historic evidence regarding them. From the ancient remains found within her borders, however, we have ample evidence that the inhabitants of ancient Tennessee were ex-

pert flint chippers. None of the mound building tribes excelled them in this primitive art. In fact, we doubt whether the stone implements of this class, in any other portion of ancient America, north of Mexico, equal the Tennessee specimens in variety and beauty of forms and materials. Many of the types found seem to have been unknown, even to the advanced tribes that erected the great mounds of the Ohio valley. The best specimens from the north-eastern states, described and illustrated by Dr. C. C. Abbott, are rude and primitive when compared with them,* and even the fine flints of Georgia and other southern states, described by Colonel C. C. Jones,† do not appear to equal the art of the flint chippers of Tennessee. Nearly all known American types are represented here, from the dainty little barbed arrow points of the Pacific coast type, to the largest flint axes, spades, and spears. Leaf-shaped and agricultural implements, spades, chisels, knives, skinners, scrapers, and many other tools used in the primitive industries, and often worn smooth by use, may be found in the Tennessee collections. The longest double-pointed knife or spear-shaped implement, and the longest barbed or notched spear yet discovered in America, or elsewhere, as far as we can learn, have been found in Middle Tennessee, and will be illustrated in this chapter. They are finely chipped and symmetrical in form. Since this chapter was first written, we have seen the pictures and descriptions of the long and beautiful flints of the California Indians, illustrated in Vol. VII, Wheeler's Geographical Survey, Plates 7, 8, and 9, yet we do not hesitate to say, that the flints of the Stone Grave race equal them in workmanship, and surpass them in size and variety of forms.

Unique implements, totems, ceremonials, and tools, unknown to even the neighboring states, are found here. Their shapes often surprise antiquarians from other sections. remains of ancient art in pottery, they indicate that the built the mounds and stone graves of the Cumberland

* See Primitive Industry, pages 77, 97.

† Antiquities of Southern Indians, Plates VII, VIII, IX.

nessee valleys were as advanced in culture as any of the aborigines within the mound districts.

The material used in manufacturing these implements abounded in East Tennessee and in the counties of the "Highland Rim" that surround the silurian basin of the central portion of the state. Many of the ancient flint pits and quarries, and the remains of the old work-shops, may still be seen.

Flint, jasper, chert, and cherty, and silicious limestones, were generally used, but arrows and implements are found of chalcedony, of transparent quartz, and of quartzite and other stones. The jaspers occur in many brilliant colors. The old arrow and implement makers must have searched far and wide for some of these rich materials. There is a popular impression that the method of making fine flints and flakes is one of the unknown arts. This is an error. There were arrow-smiths and flint chippers in most of the modern tribes, and arrow points are still occasionally made by some of the tribes of the Far West. Good specimens of the stone points of the Navajos, Utes, and other Indians, firmly fastened to wooden shafts, may be seen in the National Museum, and other public collections. The methods of manufacturing them have frequently been described.*

* Captain John Smith, writing of the Indians of Virginia in 1606, says: "His arrow-head he maketh quickly with a little bone which he weareth at his bracer (girdle) of any splint of stone or glass, in the form of a heart, and these they glue to the end of their arrows."—Quoted in *Ancient Stone Implements* (Evans), page 37.

"The Hupa Indians, of California, chip arrow-heads with a hard deer-horn fastened to a wooden handle. The work is held in the palm of the hand, which is protected by a buckskin pad, and the chips are flaked off by pressing the edge of the flint with the tool held in the right hand, the ball of the handle resting in the palm. The Point Barrow Eskimo also press downward in chipping with a similar tool."—Otis T. Mason, in *Smithsonian Report*, 1886, Part I, page 226.

"The Viard arrow maker," says Stephen Powers, "takes a piece of jasper, chert, obsidian, or common flint, which breaks sharp-cornered and with a conchoidal fracture; this he heats in the fire and then cools slowly, which splits it in flakes; then taking one of these flakes, he gives it an approximately right shape, by striking it with a rough hammer; then slips over his left hand a piece of buckskin, with a hole to fit over the thumb (this buckskin is to prevent the hand from being

In the chipping and flaking processes, sometimes percussion or hammering was used ; sometimes only pressure. A small, hard, little bone or horn implement was dexterously and steadily pressed against the brittle edges of the flint or jasper, and thus by a series of delicate flakings, on alternate sides, they were chipped into the desired forms. Necessity would soon teach the most inexperienced workman to fashion rough stones into convenient shapes; but the finer types required careful manipulation, and only experts with practiced eye and hand, and with an unusual natural appreciation of artistic forms, could have produced the rare and beautiful implements of flint, jasper, and chert occasionally found in Tennessee. Some of them equal the art work in obsidian of the old Mexicans.

We shall not attempt to present palæolithic types of flint implements. In the vicinity of Nashville there are no great gravel-beds or glacial deposits, such as occur in some other sections of the United States, where palæolithic remains, as distinct from the neolithic remains, might be found. We find many flint implements of

wounded), and in his right hand he takes a pair of buck-horn pincers, tied together at the point with a thong. Holding the piece of flint in his left hand, he breaks off from the edge of it a tiny fragment with the pincers, by a twisting or wrenching motion. The piece is often reversed in the hand, so that it may be worked away symmetrically. Arrow-head manufacture is a specialty, just as arrow making, medicine, and other arts. These pincers are probably only our compound chipper. With the Klamath Indians, a piece of bone is fastened to a wooden shaft, one and a half feet in length, the working point of which is crooked and raised to an edge, the force employed being all the time solely pushing. To guide the instrument with a steady hand, the handle is held between the arm and the breast, while the point, with but little play room, assisted by the thumb, works the edge of the flake, which again is held, for greater safety, in a piece of deer-skin. After the two sides have been worked down to a point, then another instrument is required, with which the barbs and projections are broken out. This is a needle or awl of about three inches in length, and, by a pushing motion, the desired pieces are broken out, as with the first-mentioned tool."—Smithsonian Report, 1886 (Otis T. Mason), Part I, page 226.

See also Geo. E. Sellers, in Smithsonian Report, 1885, Part I, page 871. Mr. Sellers now resides in Chattanooga, Tennessee. When recently in that city, Mr. J. B. Nicklen handed the writer a number of well-made flint arrow points for examination. He said that he obtained them from Mr. Sellers, who stated that he had made them. They did not differ from the genuine ordinary types.

rude character, but we can not feel assured that any of them should be assigned to an earlier period or race than the neolithic implements from the same section. Neither shall we attempt to illustrate many of the ordinary forms of chipped stone implements. They are found in every section of the country, and indeed, in all countries, and have frequently been described.*

The rare and curious types, some of them found only in this state, the implements used by the aboriginal mechanics, and the "ceremonials" and totems, are of more archæological interest, and give more definite evidence as to the condition of society and the state of the arts and industries of the prehistoric period.

We also find it impracticable, with the limited facilities at our disposal, to prepare engravings reproducing with exactness the natural chipped or flaked surface of many of these implements. Some of the engravings are but outline sketches. We have, however, had a number of good specimens photo-engraved by the "Moss process," directly from the objects (Plates XI, XIII, XIV), that the reader may have a more correct and exact impression of them; and most of the small engravings have been prepared with the aid of photographic outlines. The long, double-pointed implement in Plate XI is of cherty flint, and measures twelve inches. It is very thin and delicately formed, no part of it being over a third of an inch in thickness (author's collection). The sharply pointed barbed spear of yellow jasper, eight inches long (Historical Society collection), is a marvel of the chipping art. It is symmetrically beveled on both sides, in rhombic form, as if to give it a rotary motion. Two arrow points are similarly beveled. The beautiful, curious, hook-shaped implement, a light brown flint, is seven and

* Arrow points of stone, antedating the period of earliest Roman history, are plowed up on the Campagna, just outside of the walls of ancient Rome. They occur in the gravel beds of the Thames and Seine, within the limits of London and Paris. They were unearthed by Schliemann among the ruins of Mycenæ; and chipped flint implements, older than the civilization of Egypt, are found along the banks of the Lower Nile, in the vicinity of Thebes and Memphis. These remains of primitive man seem to have been distributed throughout all countries.



a half inches long (Historical Society collection). The other objects illustrated in Plate XI are of fine jasper and flint (author's collection). The plate presents them with photographic fidelity.

Fine examples of the work of the old arrow-makers are shown in Fig. 119. The two small points were chipped from translucent blue-gray chalcedony. They are very similar to the delicate arrow points found in New Mexico and along the Pacific coast. The

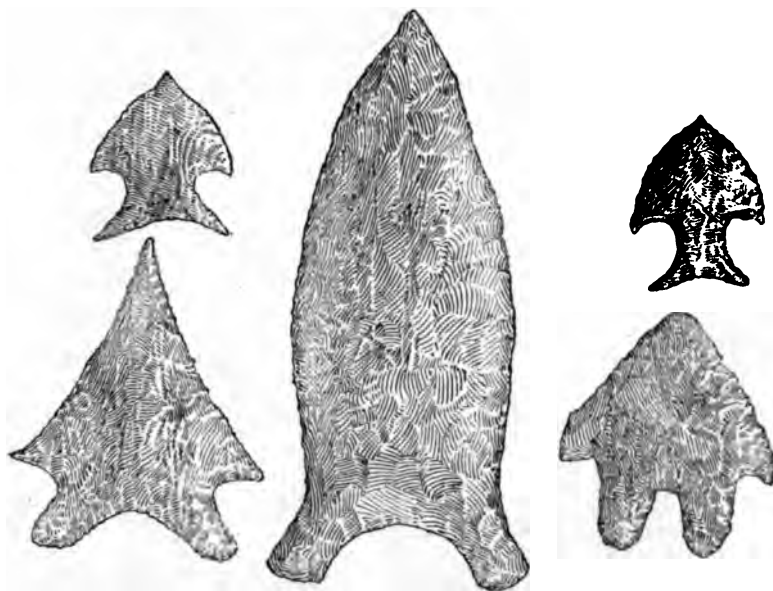


FIG. 119.—ARROW AND SPEAR POINTS (ACTUAL SIZE).^{*}

others are of fine, thin jasper. Arrows with the double or forked shank are not uncommon in this section. The largest specimen, of red and purple hue, was probably used as a spear point. These objects are from Middle and East Tennessee. There seems to be no limit to the numbers and varieties of arrow points. It would be impossible to describe or illustrate them in an ordinary volume. A number of the unusual forms are shown in Plate XII. It includes also some other objects classified as drills and scrapers.[†]

^{*} Author's collection.

[†] The specimens illustrated in this plate were selected from the collections of Jno. G. Cisco and the author.

Chipped flint implements, used for other purposes, are also numerous. It is, in fact, difficult to classify or group the large amount of this material in the various local collections at Nashville and elsewhere in Tennessee.

The village Indians who lived in the towns, forts, and settlements of the Cumberland valley, in the prehistoric period, must have been sufficiently advanced in the march toward civilization to have learned the use of a variety of implements of stone, wood, bone, horn, and shell. Sets of tools of chipped and polished stone, evidently the outfit of some ancient lapidary or artisan, are occa-

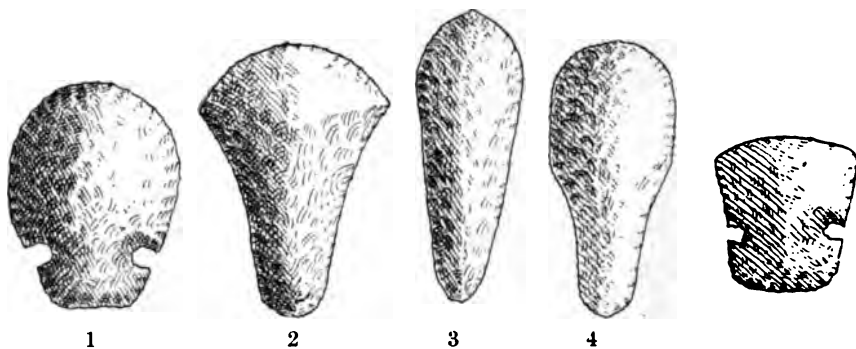
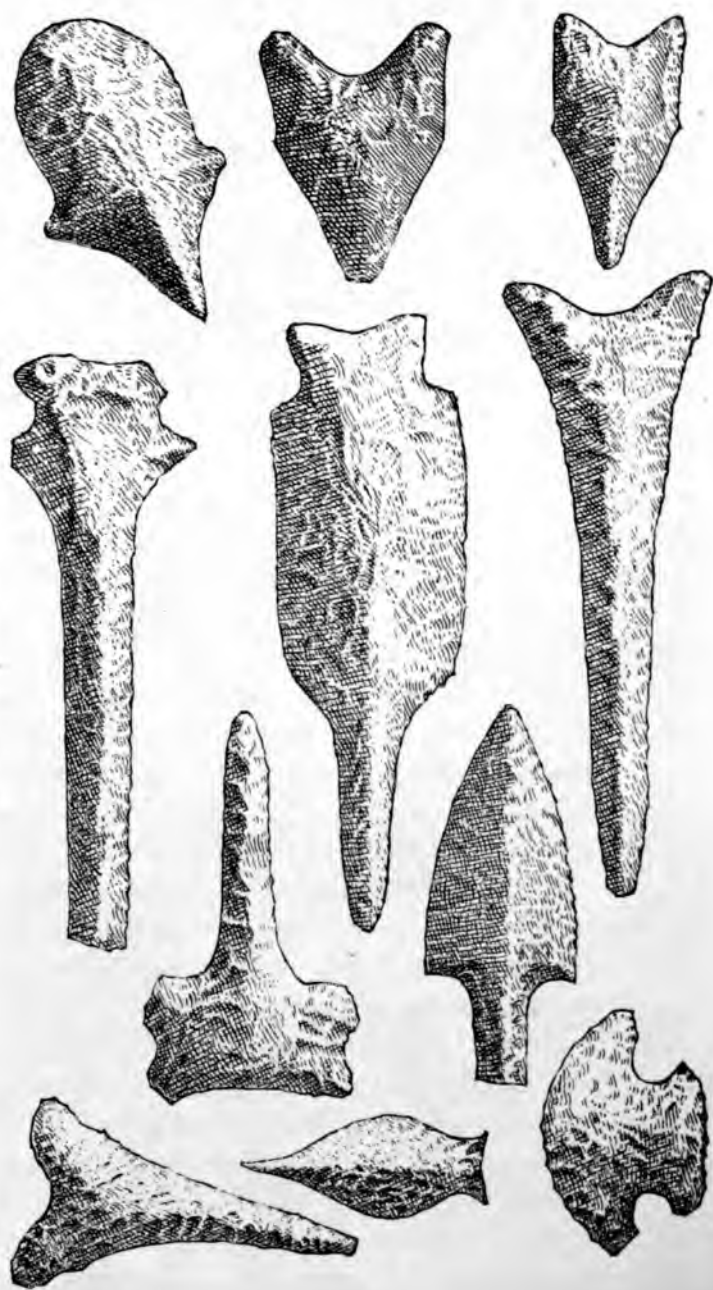


FIG. 120.—AGRICULTURAL AND MECHANICAL IMPLEMENTS, TENNESSEE (ABOUT ONE-EIGHTH).

sionally found lying together in the same grave. Eight well made implements, of various forms, all ground or polished by use, were recently found by Mr. W. W. Dosier in a single stone grave on the bank of the Cumberland below Nashville, lying beside three useful implements of bone. Mr. Jno. Blunkall found another set, mainly sharp stone chisels, and a horn handle, with a deep socket, in a neighboring grave. Caches of new flints, or cherts, in large numbers, and of the same peculiar forms, are also found, all apparently just as they left the work-shop of some old stone chipper.

Fig. 120 gives the outlines of a number of large specimens, usually classified as agricultural and mechanical implements. The originals from which these sketches were made, as they lie on a table before the writer, form an interesting group:

PLATE XII.—Unique types of flints.



No. 1. An agricultural implement or "hoe," of flinty chert, is from Madison county (J. G. Cisco's collection). It is about eight inches long, is slightly curved, and is symmetrical in form. The type is unusual in Tennessee. As it is quite common in Illinois, this fine hoe may have been an importation, in ancient times, from that section.

No. 2. Is the largest perfect fan-shaped hoe or adze we have seen, and is a fine specimen of the chipping art. It is of flinty chert from Stewart county, is twelve and one-half inches long, and eight inches wide at the blade. Although so large, it is not over an inch thick at the center. It is slightly curved or adze-shaped, and at the blade end is symmetrically beveled to a thin, sharp edge. We have a number of large flints of this form.

No. 3. A handsome, symmetric leaf-shaped type, from Davidson county, is of fine chert—almost a pure flint—and is nearly fourteen inches long. The blade end is beautifully chipped to a fine edge all around. Like nearly all of the large implements of this outline, it is a "turtle back," or adze-shaped in form. This type is not uncommon in Middle Tennessee. We have several similar specimens.

Several years ago Dr. Kirkpatrick, who resided near Nashville, and in the vicinity of the stone grave cemetery on White's creek, plowed into a cache of a dozen or more fine specimens, nearly all large, and of this general form. They were as perfect as when they left the old stone chipper's shop.*

No. 4. A paddle-shaped flint from Stewart county, glossy with use at the blade end, is ten and one-half inches long, and is as symmetrical and delicately chipped as a fine spear point. It is also slightly curved or adze-shaped.

No. 5. Is a small notched hoe, from Davidson county (author's collection). This form is not very rare.

Some of these specimens seem to be too brittle and delicately made for use as common or field implements. They may have been used as adzes in chipping the charred wood from the trunks

* We are indebted to Dr. Kirkpatrick for several of the finest of mens.

trees burned or hollowed out, in making canoes, and for other mechanical purposes.

After Fig. 120 was engraved, it seemed to represent some of these fine flints so indifferently, that we have had four typical specimens (author's collection) photo-engraved (Plate XIII), in order to give a more correct and satisfactory impression of them. (The plate represents them a little less than one-third actual sizes.) The leaf-shaped flint illustrated is fourteen inches long, and the large fan-shaped specimen is twelve and one-half inches long and

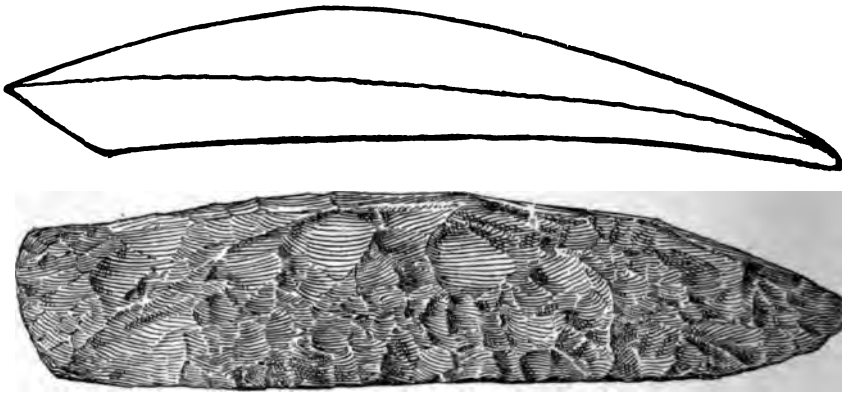


FIG. 121.—CHIPPED FLINT ADZE, DAVIDSON COUNTY (ONE-HALF).*

eight inches wide at the blade. These measures will indicate the dimensions of the others. These fine types appear to be rare or unknown in other portions of the Mississippi valley. We have not observed them in the archaeological collections of the North. They are not found in Great Britain, and we doubt whether the large flints of Scandinavia equal them in size and symmetry of form.

A fine type of the adze form is illustrated in Fig. 121. The most skillful lapidary could not improve upon the model of this tool, or cut a more useful adze in stone.† These large and slightly curved implements were too large and too long to fasten or haft in sockets. They were probably bound to wooden handles after the manner shown in Fig. 122.

* Author's collection.

† We are indebted to William Watkins, Esq., for this fine specimen. It was found on his farm, near Nashville.



Rough implements, doubtless used with handles as axes, weapons, or perhaps as hoes, are shown in Figs. 123 and 124. These varieties, although rude, are not common.

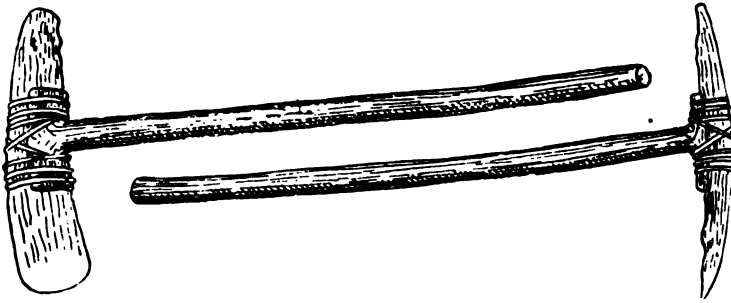


FIG. 122.—PROBABLE METHOD OF HAFTING THE ADZES AND HOES.



FIG. 123.—STONE IMPLEMENT, CUMBERLAND VALLEY (ONE-FOURTH).*



FIG. 124.—STONE IMPLEMENT. DICKSON Co. (ONE-HALF)

We have selected the spoon and tool-shaped flints and implements, rather stiffly and inaccurately illustrated in Fig. 125, from an assortment of a thousand or more Middle see flints and points in our collection, as representative of the smaller class of blunt implements and working tools †

* Dr. J. Jones collection.

† Author's collection.

mechanics of the stone age in this section. The general outlines of the forms of these peculiar flints are correct. They were found in the counties near Nashville. The variety of these small tools or

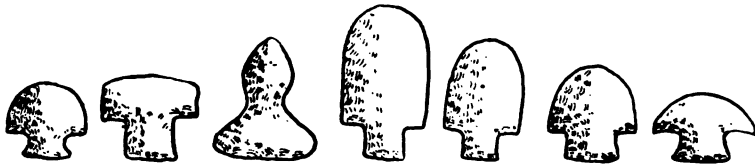


FIG. 125.—FLINT TOOLS OR IMPLEMENTS, FROM VICINITY OF NASHVILLE (ONE-FOURTH).*

tool flints indicates that there were probably separate trades or industries, requiring the use of many different kinds of implements. In some of the modern tribes, there were specialists in the different

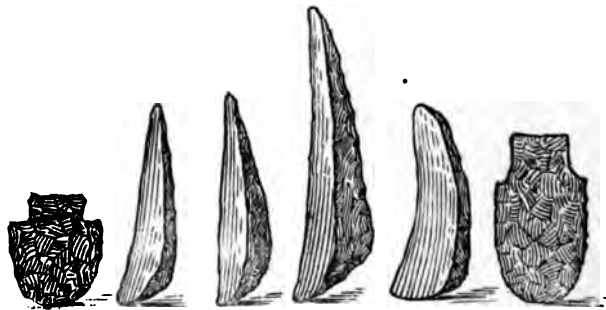


FIG. 126.—SCRAPERS, SIDE VIEWS (ONE-THIRD).*

industrial pursuits. We are told that, among the Hupa Indians of California, the arrow smith flaked and chipped the flint and obsidian arrow-heads, and that a different workman, an expert, made and trimmed the wooden arrow shafts to which the stone points were fastened.†

Fig. 126 gives side views and a somewhat more correct idea of some of the "scrapers" and spoon-shaped forms. Most of them were notched or prepared for handles, and doubtless they made convenient and useful implements.

The many flint flakes and curious forms found, show that the

* Author's collection.

† Smithsonian Report, 1886, Part I, page 630.

old flint workers were very dextrous in chipping rough stones into any shapes that suited their convenience. Fig. 127 represents a chipped stone "implement," found in a field adjoining the Noel cemetery. It may have been used as a weight or plummet.



FIG. 127.—CHIPPED WEIGHT OR PLUMMET (TWO-THIRDS).*

One of the most interesting chipped tools or implements we have seen was found in Montgomery county, near the Kentucky line. It is illustrated (actual size) in Fig. 128.



FIG. 128.—CHIPPED FLINT IMPLEMENT, MONTGOMERY COUNTY.*

This pretty little rectangle of rich, clear, yellow flint or jasper is as thin and delicately made as the finest arrow point. It has been carefully chipped and beveled to an edge with a fine

* Author's collection.

flat, sharp edges on all four sides, and must have been designed for some special use. It is one of the flint types that seems to indicate a condition of society and of the industrial arts above the ordinary stone hammer and spear stage of barbarism. A side view or section of it should have been presented to show its symmetry of form.

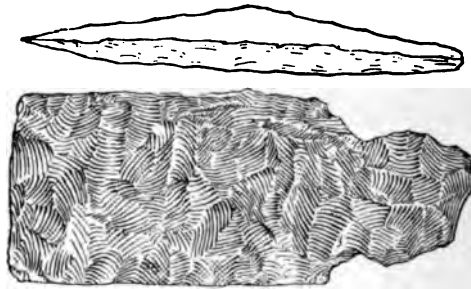


FIG. 129.—CHIPPED STONE CHISEL, HUMPHREYS COUNTY (Two-thirds).*

Much smaller, well-made, square flints, called “gambling flints,” and doubtless used for that purpose, are found in New York. We have good specimens of them.

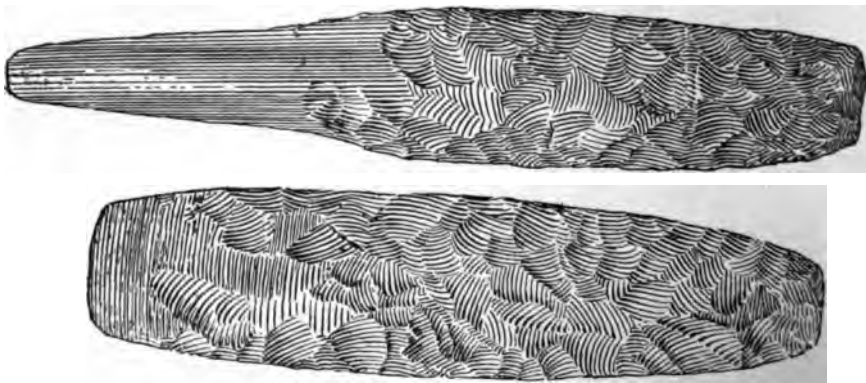


FIG. 130.—CHISEL-SHAPED IMPLEMENTS, DAVIDSON COUNTY (Two-thirds).*

The stone chisel (Fig. 129) is chipped to a sharp edge, with square corners at the blade end, and would have done good service as a cutting tool.

The chisel-shaped flints more frequently show evidences of use

* Author's collection.

than any other class of chipped stone implements. They are found in the stone graves and elsewhere in considerable numbers, and of various shapes and sizes, usually being slightly curved, or shaped like a flat adze.

Illustrations of this class are presented in Fig. 130.

Little short chisels are found that doubtless had handles of wood or bone. Others are long, and were probably used without separate handles. Five fine specimens of yellow and gray flint, and as sharp as an ordinary table-knife at the blade edges, were recently found in the same grave. The chisels, or the implements

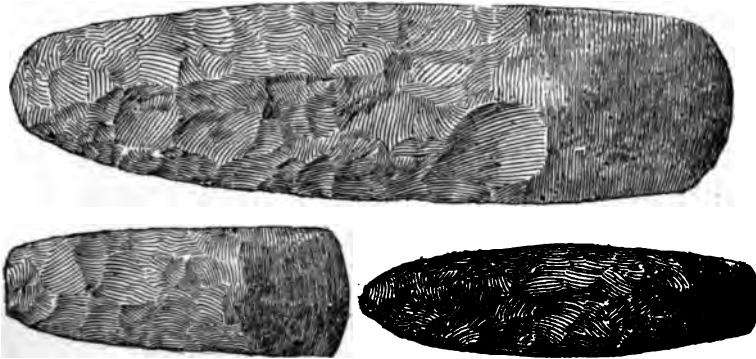


FIG. 131.—FLINT CHISELS, DAVIDSON COUNTY (TWO-FIFTHS).*

of that form, must have been favorite tools in the old work-shops, if we may judge from the numbers found in the ancient burial grounds. Three "chisels" from the set of five, are shown in Fig. 131.

A stone cutting knife, with a well-ground edge, is shown in Fig. 132.

It must have been a serviceable knife in its day, its edge being still sharp and well beveled. It was doubtless firmly fastened to a handle of wood or horn.

The chipped cutting-knife, with the double edge, was about four inches long (Fig. 133), was recently found in the same grave.

* Author's collection.

grave of a small cemetery a few miles west of Nashville, on the Cumberland river. The deer-horn handle was discovered in the excavated earth a few feet from the knife. It is partly decayed at the end, but from the oval shape of the deep socket in the horn, it

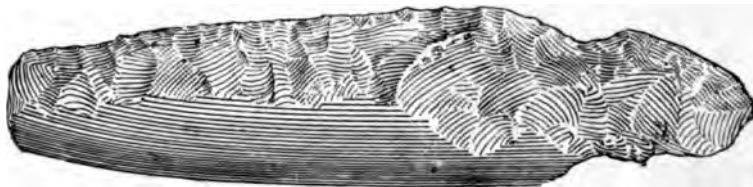


FIG. 132.—A FLINT CUTTING KNIFE (TWO-THIRDS).*

evidently originally held the knife or some similar implement. The knife end of the horn is pierced with rivet holes, in which, perhaps, the string was fastened that aided in binding the knife to it.

A similar handle was found by Mr. Blunkall with a kit of flint

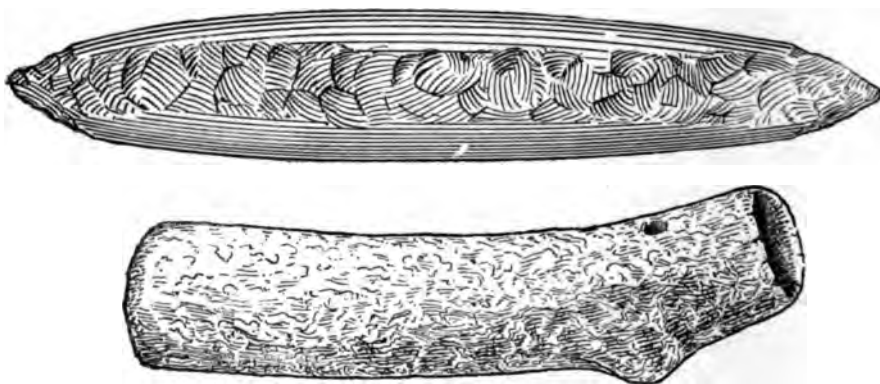


FIG. 133.—FLINT KNIFE AND HORN HANDLE, DAVIDSON COUNTY (TWO-THIRDS).†

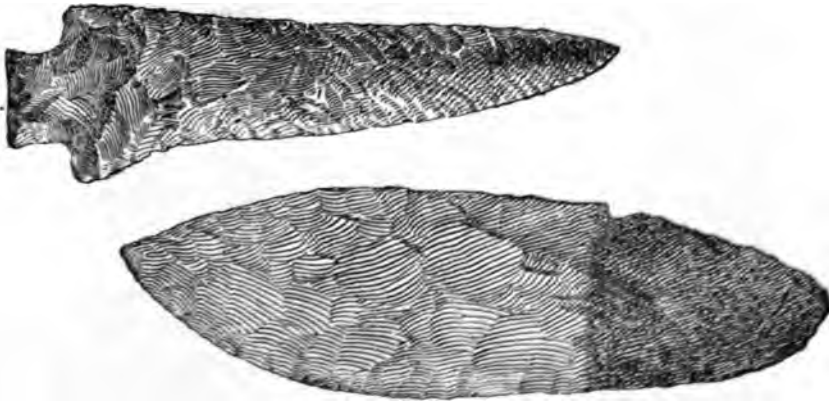
chisels in a grave of the same cemetery. These are the only ancient horn handles from this section that have come to our notice. It seems singular that they are not more frequently found, considering the number of tool handles that must have been used. Perhaps

* Johnson collection.

† Author's collection.

the latter were chiefly made of wood, that has entirely decayed from lapse of time. Ancient chipped flint implements, with horn handles, have frequently been found on the Pacific slope and in Europe. Many of them were preserved from decay in the caves and in the lakes of Switzerland.*

The implements illustrated in Figs. 134 and 135 (author's collection) were probably not spears, but, judging from their forms, were intended for cutting-knives, and doubtless had short handles suitable for that purpose. No. 134, as will be observed, is a fine



FIGS. 134 AND 135.—FLINT KNIVES (TWO-THIRDS).

piece of chipped work. The small flake grooves are rounded or arched over the blade, with a regularity and precision that appear very remarkable.

In No. 135 the end of the flint, formerly hafted, still shows the different or mottled surface, caused by the glue or handle, while the rest of the flint is bright and clean. These knives were found in the cemeteries in the vicinity of Nashville, the larger one in a stone grave.

Fig. 136 represents two small implements from the graves,

* In exploring the houses of the cliff dwellers of Colorado, flint knives with wooden handles were recently found.

probably knives. The larger one (Giers' collection) has a sharp blade.

Most of the large flint and chert implements were probably

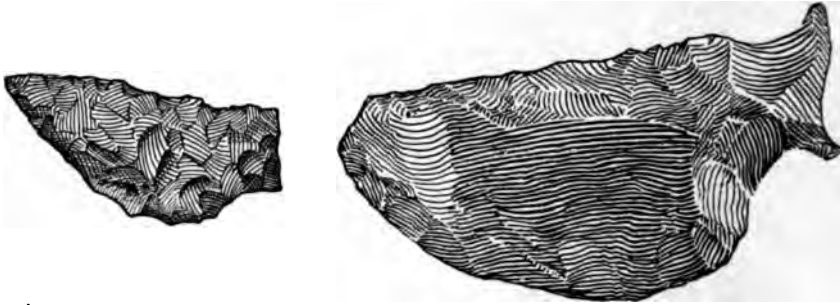


FIG. 136.—FLINT KNIVES (ACTUAL SIZE).

held in the hands without separate handles, as the edges of the handle ends are usually not sharp, and could be easily rounded. The handles of some of the large implements were also probably

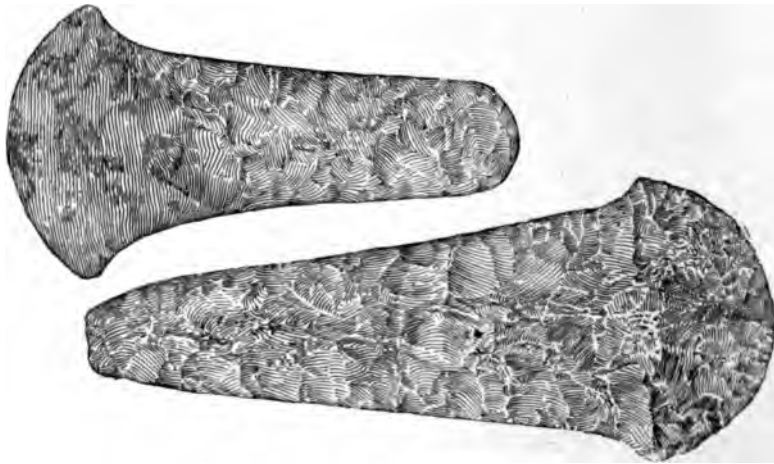


FIG. 137.—FLINT IMPLEMENTS (TWO-FIFTHS).*

covered with buckskin or cloth for convenient handling, as was the custom of some of the California Indians in using the large implements of chert and obsidian.†

* Johnson and author's collections.

† Smithsonian Report, 1886, Part I, page 222.

Fine types of flint implements, doubtless used without separate handles, are illustrated in Fig. 137. They are from the cemeteries in the vicinity of Nashville, and were, doubtless, useful tools. They might have been employed for many mechanical purposes.

A handy little hatchet, with finely polished blade and sharp edge, is shown in Fig. 138. It was found by the author in a grave of the Byser farm cemetery on White's creek, near Nashville. As both sides of the blade have the same bevel, we call it a hatchet, or axe, or skinning implement, instead of a chisel or adze. It may have been mortised into a wooden socket or hafted at the center.

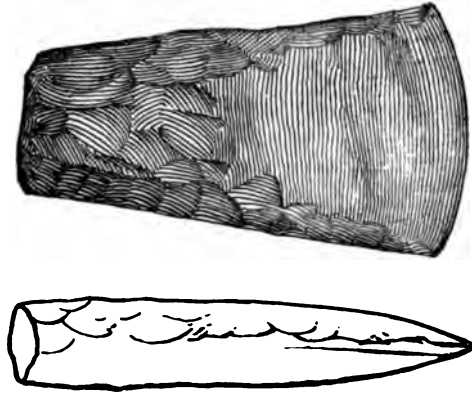


FIG. 138.—STONE HATCHET, WHITE'S CREEK, NEAR NASHVILLE (THREE-FIFTHS).*

Large and small axes, celts, fleshers, knives, awls, hoes, and other forms of chipped flint implements, with polished or ground edges, are quite common in Tennessee. Some of the axe-shaped forms are very large. Specimens a foot or more long, and weighing five or six pounds, are occasionally found. One of the *finest* seen in the collection of the Tennessee Historical &

Among the best examples of the *flaking* found in Tennessee, are the flints of the *type* 139. No finer flint forms are to be found in *lay*. They equal the remarkable work of the

* Author's collection.

This specimen is of fine lustrous gray color, and shows the same flake bed or groove on both sides. The general form is well outlined in the engraving, but not the finely chipped surface. A single long flake has evidently been first struck from each side, a piece of work that would seem to be next to impossible, or an accident, were it not for the number of flints found of this special form, and with

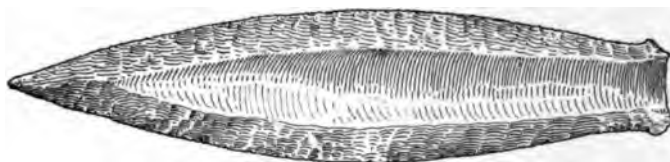


FIG. 139.—FLAKED SPEAR-HEAD, MAURY COUNTY (TWO-THIRDS).*

similarly flaked or grooved sides. The edges were doubtless chipped after the flaking operation, and these delicate and symmetrical little spears and arrows thus completed. This particular form is a specialty of Maury county, and is well represented in the fine collections of Rev. C. F. Williams and Captain Smith, of the Athenæum at Columbia in that county.

Fig. 140 illustrates a beautifully chipped dagger of compact

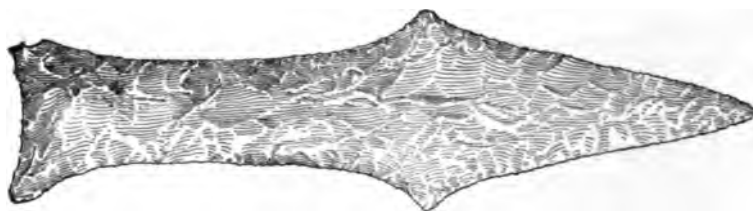


FIG. 140.—FLINT DAGGER, HUMPHREYS COUNTY (ONE-HALF).*

cherty flint from Humphreys county, Tennessee. It is a symmetrical weapon or implement, about eight inches long, with "a regulation handle," and a flat, tapering blade, beveled to fine edges, and delicately serrated.

The finely chipped Danish daggers, illustrated by Sir John

* Author's collection.

Lubbock,* do not represent so well the dagger form. Although fashioned like some of our modern metal daggers, the old Tennessee flint chippers must have full credit both for the invention and workmanship of the fine specimen illustrated. It is so frail and brittle, and so carefully chipped, that it was probably not intended for use as a weapon, but was carried or worn as a "ceremonial" or emblem of distinction upon public occasions.

Prof. Putnam, of the Peabody Museum, obtained a fine specimen of the same form near Nashville. Another one of about the

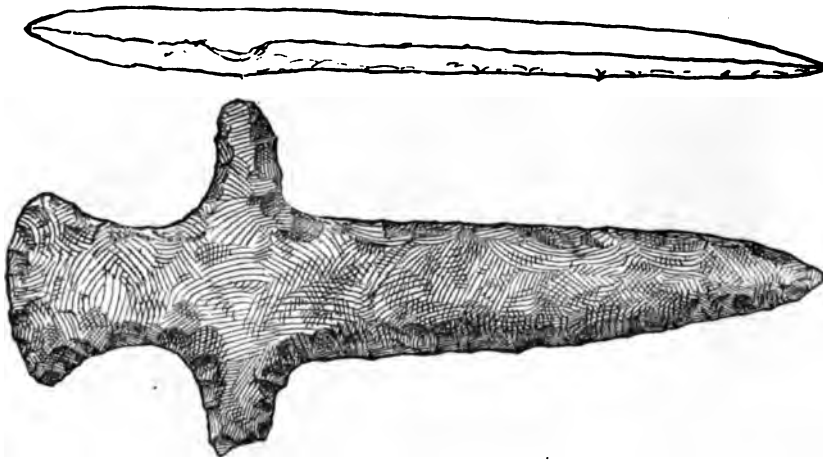


FIG. 141.—FLINT DAGGER, MARSHALL COUNTY (ACTUAL SIZE).†

same length and shape was found in a grave mound on the Warrior river, in Alabama, and is now in the National Museum at Washington.‡

A pretty little flint of the dagger form (Fig. 141) offers another illustration of the great variety of unusual types found in Tennessee. Although it resembles a modern dagger in form, it would be mere conjecture to assign it to any special duty. In the journal of the voyage of Cabrillo to the California coast, A. D. 1542,

* Prehistoric Times, page 101.

† Rev. C. F. Williams collection.

‡ Smithsonian Collection (Rau), page 15.

it is stated that the natives there "wore their hair tied up in long strings, to which were attached small daggers of flint, bone, and wood."* This little flint may have been used like the California flints, and the *modern little metal daggers* sometimes seen, as an ornament for the hair. The conceit seems to have been an ancient one!

Another dagger form is shown in Fig. 142. This unique ceremonial was recently found in a stone grave cemetery on the Cumberland river, a few miles west of Nashville, by W. W. Dozier, one of our "explorers." The double points on the sides, doubtless, had some significance in the system of tribal or family symbols or totems of the native race that once inhabited the Cumberland valley.

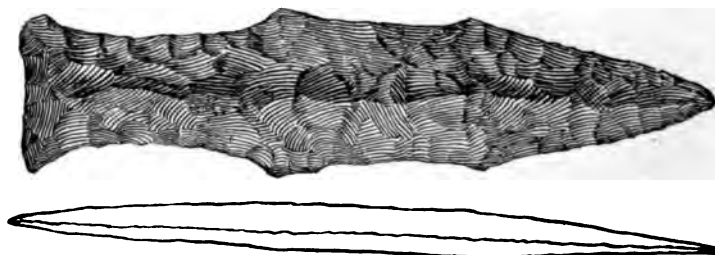


FIG. 142.—FLINT DAGGER, DAVIDSON COUNTY (ONE-HALF).†

Special attention is called to the fact that the dagger and ceremonial forms of this class, and many of the chipped ceremonials used for similar purposes, are nearly all from seven and one-half to eight inches long, showing that they were probably made to order of this length by the old flint experts in accordance with some ancient tribal usage or law. This one is exactly seven and one-half inches.

The first dagger illustrated is a delicate, thin, flat flint, scarcely a half inch thick at the center. As will be observed from the sectional view of this flint, it is re-enforced by a ridge running down its center, nearly three-fourths of an inch thick. This is a characteristic of most of these fine ceremonials. While not well

* Wheeler's Survey, Vol. VII, page 21.

† Author's collection.

adapted to practical use as weapons, and showing few marks of service, most of them are thicker and stronger than the thin blades of the long spears and swords.

A ruder implement of the dagger form, seven and one-half inches long, was found in Dickson county, Fig. 143. It appears to

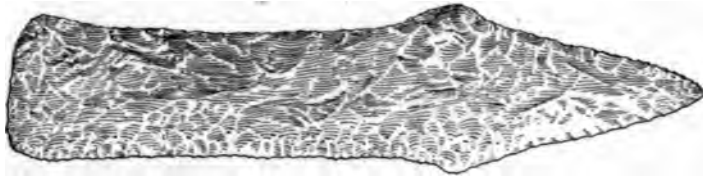


FIG. 143.—DAGGER OR SPEARHEAD, DICKSON COUNTY (TWO-FIFTHS)*.

be a little worn at the point, and may have been put to some practical use.

Another unusual form of flint dagger was found on the Big Harpeth river, near one of the stone grave cemeteries of that section (Fig. 144). This is a shorter flint, well fitted for some mechanical or domestic use, and may not have been intended for mere ceremonial purposes.

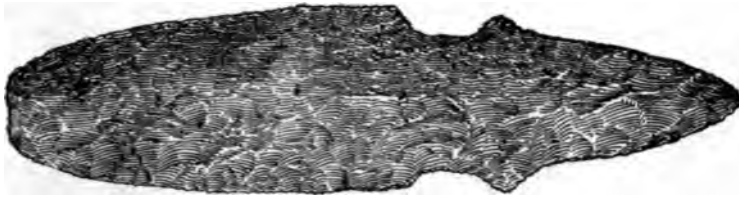


FIG. 144.—FLINT IMPLEMENT, FROM BIG HARPETH RIVER (TWO-THIRDS).†

The finely chipped spear or harpoon, nearly six inches long, with double barbs (Fig. 145), was found in Stewart county. It may have been used as a fish-spear or lance-head, or perhaps as a "ceremonial." A much more effective and durable spear could have been made in less time from a sharpened bone or from a shell.

* Author's collection.

† Author's collection. Kindly presented by L. H. Freeman.

The smaller barbed spear or arrow points of fine flint (Fig. 146) may have been used in spearing fish or for some special purposes. The forms are rare.

Among the most interesting "implements" of flint and chert found in Tennessee are the long, delicately formed knives and lance-shaped forms. So far as we can learned, they are not found in other sections of the Mississippi valley. They seem to be a specialty of Middle Tennessee.

A good example of the double pointed blade form may be seen photo-engraved from the original, in Plate XI. It is twelve inches long and of graceful outlines, its sides being as straight as if ground to a fine edge. We have a similar specimen of pure, black flint, a

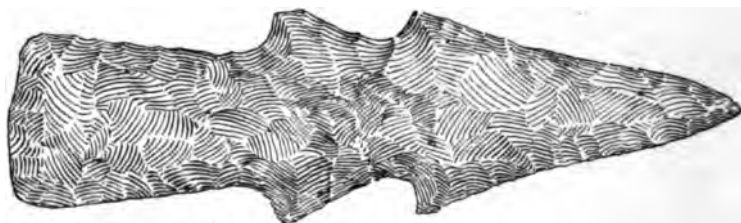


FIG. 145.—DOUBLE-BARBED SPEAR OR IMPLEMENT (TWO-THIRDS.)*

half inch longer, but slightly fractured. Some of these double-pointed sword-blades or "ceremonials" are much longer.

Dr. Joseph Jones, in exploring the chief burial mound of the De Graffenreid works, on the Big Harpeth river, found beside the skeleton of the principal figure of the group, placed in a sitting posture in the center of the mound, the magnificent chipped sword or "implement" represented in Fig. 147. It lay within the very bones of the skeleton hand, as if placed there as a tribute to his rank, or as a badge of distinction to be carried into the "spirit land." It is twenty-two inches long and but about two inches wide.

No similar implement equaling it in length, and in delicacy of form and finish, has probably ever been discovered in any part of

* Johnson collection.



FIG. 146.—BARBED SPEAR POINTS, DICKSON COUNTY (THREE-FOURTHS.)*



FIG. 147.—SWORD BLADE OR CEREMONIAL IMPLEMENT, WILLIAMSON COUNTY (TWENTY-TWO INCHES LONG).†



FIG. 148.—FLINT NEEDLE (ONE-HALF).‡



FIG. 149.—SWORD-SHAPED SCEPTER OR IMPLEMENT (ONE-THIRD).‡

* Author's collection.

† Dr. J. Jones collection.

‡ Johnson collection.

‡ E. D. Hicks collection.

the world. It was, of course, useless as a weapon, and too fragile for any mechanical service.

We can not but admire the surprising skill of the old flint chippers, who could successfully execute this delicate piece of work. The flints and fine cherts are so brittle, and required such careful manipulation, that these slender forms seem to represent the masterpieces of the stone age. The ancient experts, however, left many examples of their skill. The delicate little flint needle, eight inches long (Fig. 148), required the same care and skill in transforming it from a rude flake into its present symmetrical form.

Fig. 149 represents another of the sword or scepter-shaped objects, fourteen inches long, from Humphreys county, evidently an emblem or scepter of authority, as it is too brittle and easily broken for practical use as a weapon. The notched portion may have formed the handle, or the six small raised points on the sides, similar to one of the daggers illustrated, may have indicated the rank of its ancient owner. Mr. Otto Giers, of Nashville, has a much smaller flint of analogous form, with four small points on the sides. The Rev. C. F. Williams has a beautifully chipped, double-pointed chert spear or sword blade, sixteen and a quarter inches long, from Maury county. In the collection of the Historical Society, the Johnson collection, and at the Athenæum in Columbia, there are a number of these fine long flints.

The long notched spear, photo-engraved directly from the original in Plate XIV, is in the collection of the Tennessee Historical Society. It is seventeen inches long and three and a half inches wide at its base. It was found in Franklin county, Middle Tennessee, a few years ago, and presented to the society by T. D. Gregory, Esq., of Winchester. The photo-engraving presents very clearly its exact form and surface. Even the strings by which the writer tied it to the card-board to be photographed may be clearly seen, and give assurance of the truthfulness of the reproduction.

We doubt whether a barbed or notched stone spear-head, its equal in length and symmetry of form, has been discovered in America, or even among the remarkable flint remains of the Scan-

dinavian countries of Europe. The largest Danish flint spear or dagger mentioned by Lubbock* is but twelve and a half inches in length. The longest flint spear or knife of any kind described or illustrated by Squier and Davis is but eleven inches long, and Schoolcraft does not mention one longer than seven inches. In the elaborately illustrated and valuable volume of Mr. John Evans upon the Ancient Stone Implements of Great Britain, we observed no specimens even approximating in size the large and long chipped stone implements of Tennessee. Dr. Abbott states that the maximum length of the flint and jasper spears found within the limits of New England and the North Atlantic States is but six inches.†

The only flints in America, north of Mexico, rivaling these fine Tennessee implements, have been discovered in the ancient graves of the California Indians, and are well described and illustrated by Prof. F. W. Putnam and Dr. C. C. Abbott in Wheeler's Survey, Vol. VII. The largest one illustrated is but nine and three-quarters inches long. Dr. Abbott, however, reports the discovery of a flint implement fifteen inches in length, in Oregon.

As further evidence that these large chipped implements of the Stone Grave race are unequaled, even in other southern states, Colonel C. C. Jones, of Georgia, one of the most reliable authorities upon this subject in the South, states: "The largest spear or lance-head we have seen within the geographical limits of Georgia was obtained from a grave mound which stood upon the point of land formed by the confluence of the Etowah and Oostanaula rivers. It is nearly fourteen inches in length and three and one-fourth inches in width, weighing two pounds and two ounces avoirdupois. It is perfect, with the exception of the point, which was broken off at the time this implement was taken from the mound. No spear-head of such magnitude, as far as my knowledge extends, has been found within the limits of the southern states."‡

* Prehistoric Times, page 116.

† Primitive Industry, page 26.

‡ Anthropology of the Southern States, page 60.

From the engraving of this large spear-head in Colonel Jones's work, it appears to be a roughly chipped implement, much inferior in workmanship to the fine chipped flints and chert specimens of the Stone Grave race. It is more than three inches shorter than the symmetrical spear-head of the Tennessee Historical Society, and would attract little attention if placed beside the finer and larger flint implements of the Cumberland valley.

The long Franklin county flint (Plate XIV) does not appear to be fitted for actual use as a spear or weapon of war. It is too long and too easily fractured, and the labor required to make it too great to justify the belief that it was intended for that purpose. It was evidently designed as a halberd or weapon of parade, for some ceremonial occasion. It may have crowned the staff of a tribal or family banner, or it may have been carried as a sword or an emblem of authority.

The three magnificent chipped stone "implements," with ornamental handles, well photo-engraved in Plate XIV, we will take the liberty of designating-scepters. To the writer's mind, they offer direct and very positive evidence that these large stone objects were used for ceremonial purposes of a religious, military, or public character. They were found in a cache together, in Humphreys county, Middle Tennessee, and presented to Edward D. Hicks, Esq., of Davidson county, and are now in his fine collection. They are respectively twenty, seventeen and one-fourth, and sixteen and one-half inches in length, and are composed of chert or compact silicious limestone. The symmetry and beauty of the handles, the exact projections on opposite sides, the tapering forms, and the evidently important place these rare objects must have held in the religious and social life of the old Tennesseans, all invest them with peculiar interest.

Here we have, in all probability, the scepters or royal maces once used by the magnates of the race that built the ancient mounds and fortifications of Middle Tennessee. They may have been the insignia of chieftainship or of the priesthood. The most distinguished personage of the Stone Grave race yet identified, if

PLATE XIV. Ceremonial implements.



we may judge by the surroundings and character of his burial, the honored chieftain or priest whose remains were unearthed on the banks of the Harpeth river by Dr. Jones, was placed in his rude sarcophagus with a long flint sword or scepter in his right hand, showing very conclusively the use of these large implements.

If the reader will turn to the subsequent chapter upon shell remains, it will be seen that the "fighting figure," well engraved upon a large gorget, grasps in his right hand a double-pointed sword blade or knife of almost the exact form of some of these large flints. The double-pointed implement photo-engraved in Plate XI is nearly its duplicate in shape and size, offering additional evidence of the genuineness of both the ancient gorget and the fine flint. The old chief or mythological hero engraved upon the shell evidently belonged to the Stone Grave race.* Their remains are found in the valleys of East Tennessee and in Northern Georgia, in the mounds in which the gorgets have been discovered.

La Vega tells us that the large wooden statues guarding the gates of the rude temple discovered by De Soto on the banks of the Savannah river, at Tolomeco, were armed "with clubs, maces, and copper hatchets;" also, that some of them were armed with long pikes;† thus indicating that the southern Indians, within the historic period, were acquainted with the uses of such objects, as insignia of authority.

Upon public or state occasions, the historic tribes paid considerable attention to forms and ceremonies. The tattoo marks, the number of feather plumes, the battle-ax or war club, the engraved breast-plates, the upholding of the pipe of peace, were insignia or symbols of rank and authority used and respected by them. We learn, also, that chipped implements of chert, jasper, and obsidian were used by the Indians of California upon public and ceremonial occasions.

* Plate XVI.

† History of Alabama (Pickett), Vol. I, page 66; Garcillaso de la Vega, pages 274, 282.

Writing of the habits and customs of the Hupa Indians, formerly one of the finest tribes of Northern California, Mr. Otis T. Mason, of the National Museum, states, "that among the articles paraded or worn in the ceremonial dance, is a flake or knife of obsidian or jasper, some of which are fifteen inches or more in length, and about two and a half inches wide in the widest part. These are wrapped in skin or cloth, to prevent the rough edges from lacerating the hand, but the smaller ones are mounted on wooden handles and glued fast. The large ones can not be purchased at any price, but Mr. Powers procured some about six inches long at \$2.50 apiece. These are not properly knives, but jewelry for sacred purposes, passing current also as money."*

Upon examining the photographic plates illustrating the long ceremonial flints from the graves in California (Wheeler's Survey, Vol. VII), we find them to be of the same general character and form as the simpler types of the long "ceremonials" found in the stone graves in the Cumberland valley. They are the only flints yet discovered, so far as we can learn, that seem to bear a close resemblance to some of the Tennessee types. They suggest the possibility of some ancient kinship or association between the tribes of the Far West and the ancient inhabitants of the Mississippi valley. Any old collector can distinguish these California and Tennessee flints, so nearly alike, from the long flint swords and "daggers" of the Scandinavian races, and even from the longest flint types of the north-eastern Indians.

The longest California specimen illustrated is nine and three-fourths inches in length, and is almost a duplicate in form of the long sword or ceremonial flint photo-engraved in Plate XI (author's collection).

The California flint is represented in Fig. 150, one-half actual size. The Tennessee flint, twelve inches long, is reduced in the plate in the same proportion.

* Smithsonian Report, 1886, Part I, page 222; Powers's Tribes of California, Contributions to American Ethnology, Vol. III, page 79.

In describing the weapons of war of the Yurok Indians of California, Mr. Powers (p. 52) states that they formerly used large jasper and obsidian knives, but "which nowadays are kept only as ornaments or objects of wealth, to be produced on occasions of a great dance." From recent explorations in the cañons of Colorado, we learn that the cliff dwellers used long chipped flint knives, with flat blades, but their forms and dimensions are not specially stated.

Very beautiful long spears of obsidian and chalcedony have been found in Mexico that were evidently used in ancient times for ornamental or ceremonial purposes. There were several in the Christy collection, as delicately wrought as a modern onyx or agate paper cutter, and of as little use as a weapon.*

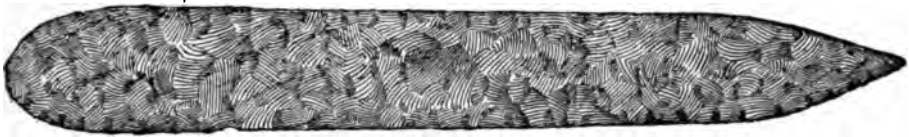


FIG. 150.—CEREMONIAL FLINT, CALIFORNIA (ONE-HALF).

Still more remarkable than the fine "scepters" of the Hicks collection, photo-engraved in Plate XIV, is the scepter of gray flint of the same general form, but of somewhat finer texture and workmanship, in the collection of Mr. W. D. Buchanan at Nashville (Fig. 151). This splendid piece of ancient art in stone is thirteen and one-fourth inches long, and fully five inches wide between the hilt points. It will be observed that it is wider at the hilt and shorter in the blade than the long scepters of the Hicks collection. It is also somewhat more artistically executed, being *but a half inch thick* at the center of the handle. Near the end of the blunt blade it is thicker than at any other point, showing that it was not intended for cutting or for practical use as a weapon, but that it was probably used as a halberd or mace. We have never seen a specimen of aboriginal art from the valley of the Mississippi superior to this fine flint excepting perhaps some of the

* Prehistoric Man (Wilson), Vol. I, page 193.

shell gorgets. It was found in Sumner county, about twenty miles north of Nashville, on the old Talley farm, adjoining the Rutherford-Kiser farm, upon which the ancient fortifications and settlement heretofore described were located. It is evidently a relic of the interesting race that peopled these earth-works. Although perfect



FIG. 151.—CEREMONIAL IMPLEMENT OR SCEPTER, SUMNER COUNTY (ONE-FOURTH).*

when discovered, it has unfortunately been broken in two places, as shown in the engraving. The latter was made from an exact outline drawing, but does not show the natural chipped surface of the stone.

Fig. 152 represents another chipped flint of singular form, seven and a half inches long and two and one-fourth inches at the wide

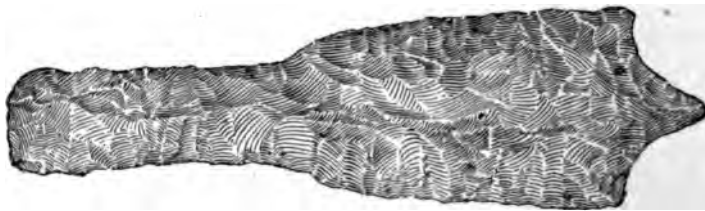


FIG. 152.—CEREMONIAL FLINT (ONE-HALF).†

end. It is unique—no similar object having been discovered, so far as we can learn—but shows traces of similarity to the form of the Buchanan scepter. It is evidently a ceremonial, perhaps a small mace, as it is blunt at both ends, and has no cutting point or edge.

* W. D. Buchanan collection.

† Johnson collection.

It may have been used like the smaller ceremonials of the California Indians, "mounted on wooden handles, and glued fast." Its length, seven and one-half inches, corresponding with the length of many of the dagger ceremonials, was evidently the *regulation* measure of these ancient implements. We have a number of delicate spear-head forms of this length, that were probably used for the same purpose.

Among the most interesting objects yet discovered in Tennessee, probably belonging to the ceremonial or totem class, are the

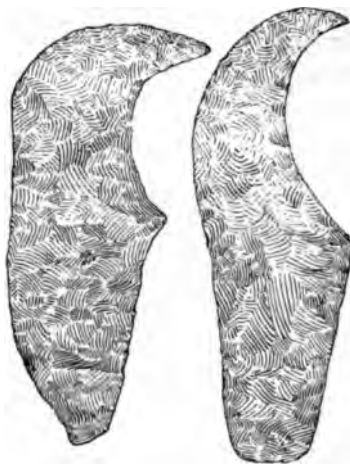


FIG. 153.—CHIPPED STONE "HOOKS," STEWART COUNTY (ONE-THIRD).*

chipped flint and chert "hooks" or "sickles." One of the most beautifully executed specimens is photo-engraved from the original (one-half actual size) in Plate XI. It is seven and one-half inches long. Two others, of nearly the same length (six and one-fourth and six and three-fourths inches), from Stewart county, are illustrated in Fig. 153. Two shorter and broader types, from the adjoining county of Humphreys, are represented in Fig. 154. We can only conjecture the uses to which these rare implements were applied. We classify them under the general title of "implements," for want of more definite knowledge of them. Some of them be-

* Johnson collection.

ing of rather rude workmanship, when they first came to our notice, we supposed they might have been designed for some mechanical purpose, but we now regard them as totems or ceremonial objects. The specimens engraved are beveled to a fine edge and sharp point at the end, like the knives and spears. Some of them were probably held in the hand. The short ones may have been attached to wooden handles or staffs, the notches on the sides being used in hafting them. The only piece of wood we have discovered in the Noel cemetery (in a grave) is a small sickle-shaped object or

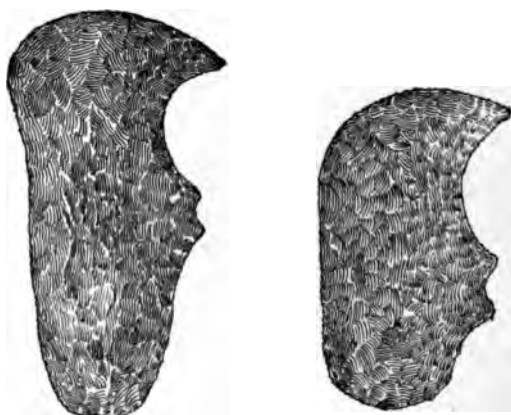


FIG. 154.—CHIPPED STONE "HOOKS," HUMPHREYS COUNTY (ONE-THIRD).*

ornament, in the form of one of these "hooks." One side of it was plated or covered with a thin coating of copper, and thus preserved.

Since the discovery of the chipped stone "hooks," in the adjoining counties of Stewart and Humphreys, the still more remarkable double hook or claw (Fig. 155), of compact flinty chert, has been discovered in Humphreys county, which, we think, throws considerable light upon the single "hooks," and fairly well proves that the latter were totems, and were not used for any mechanical purpose. This unique specimen is twelve inches long and four and one-half inches wide at the center. It is chipped to a well-beveled edge all

* Author's collection.

around, and is beautifully serrated on the inside of the claw, in imitation, we presume, of the natural claw of the craw-fish, after which it seems to have been modeled. Its striking likeness to the natural claw, and its symmetric form, show the wonderful skill of the old stone chippers.

In the Indian tribal organizations, which seem to have been very similar throughout ancient North America, the tribes were subdivided into groups of families or gentes. Two or more gentes formed the phratry or next larger division; the phratries formed the tribe. Each gens was usually named after some favorite animal or object, the latter thus becoming its badge or emblem

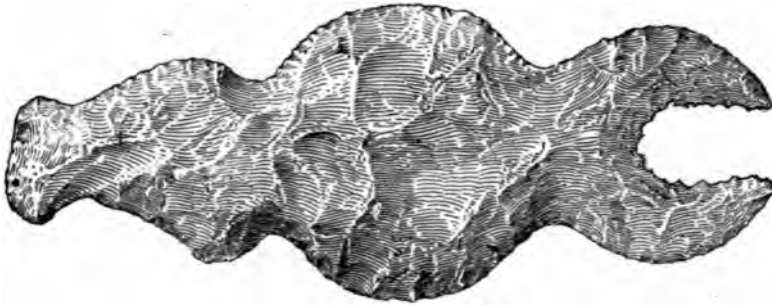


FIG. 155.—CHIPPED STONE CLAW, HUMPHREYS COUNTY (ONE-THIRD).*

of distinction, or totem. The wolf, the turtle, the serpent, and the eagle were among the most familiar totems. The eagle was the totem of the ancient Mexicans, and is still emblazoned on the national banner of Mexico.

The leading members of the gens or groups of families named after the turtle, for instance, would take their names from the turtle, as Big Turtle, Little Turtle, Snapping Turtle, and Mud Turtle. The family emblem thus became an important feature in its religious and social life. Pipes were carved in imitation of it. It was doubtless engraved upon the family gorgets of It was the distinctive mark by which the family was known. It was looked upon with veneration, sometimes amounting to

* Hicks collection.

or nature worship. In examining the organizations of some of the southern tribes of Indians, we find that the Creeks had twenty-two gentes, each represented by an emblem or totem; the Chickasaws had twelve gentes and two phratries; the Cherokees had ten gentes; the Shawnees, thirteen; and the Choctaws, eight. All had totems or family names. The village Indians of the pueblos were also divided into gentes, named after the deer, bear, rattle-snake, and other objects, animate and inanimate.

We find the Choctaws, one of the leading southern tribes, residing at an early period in Alabama and Mississippi, were divided into eight gentes, and that one of them took its name from the *craw-fish*, which thus became its totem or family symbol.* Many of the ancient remains of pottery, stone, and shell found in Middle Tennessee, and in the old Choctaw country, are very similar. It therefore appears probable that this humble little fish-animal, found every-where in our southern rivers, was adopted as a totem in prehistoric times, and may have given its Indian name and *claw form* to the ancient chert totem of the *craw-fish clan* recently discovered in Humphreys county. No other satisfactory explanation as to the use of this interesting object having been suggested, we offer this view as affording a very reasonable solution of the problem.

A friend, who has always insisted that the mound builders were a very advanced race, on seeing this fine specimen on my desk, exclaimed: "There, now, I told you they were civilized; you see they had boot-jacks!" But holding the theory, as we do, that the aborigines belonged to the *moccasin family*, and not to a superior race, we can not accept the boot-jack hypothesis, though thus plausibly presented.

The single claws or hooks, and the double claw, having been found in the same or adjoining counties, were probably totems of the same gens or clan that may have occupied that immediate section at some period in the past. The double claw could have been

* Ancient Society (Lewis H. Morgan), page 162. Dr. Cyrus Byington, a missionary of high character, resided among the Choctaws as early as 1820, and gave to Mr. Morgan the names of the old gentes or totems of that tribe.

conveniently held in the hand as a scepter, or, like an eagle upon a flag-staff, it might have adorned the ancient banner of the craw-fish family upon state occasions. We have, however, more direct evidence that the *craw-fish* was a family totem, in the handsome little perforated pendant, fashioned somewhat in the form of a claw or cray-fish (Fig. 156). The fact that it was found in Stewart county (Middle Tennessee), the locality of the discovery of some of the hooks, also strengthens the testimony offered by its form.

There is no mistaking the use of this little pendant. It was doubtless once worn upon the neck or breast of some member of the ancient cray-fish or craw-fish family.



FIG. 156.—CRAW-FISH TOTEM, STEWART COUNTY (ACTUAL SIZE).*

The material of which this polished totem is composed, is a compact encrinital red limestone, full of pretty white fossils. The incised markings or symbols upon it had no doubt some special significance in their day. They might tell an interesting story if we could interpret them.†

The turtle, the familiar totem among several Indian tribes, has also been found in flint or chert. A rather rudely chipped example from Smith county, Middle Tennessee, is shown in Fig. 157.

Although a rough specimen, as compared with the spirited little terra cotta turtle from the Noel cemetery, there is no mistaking its identity. The turtle was evidently one of the family totems of

* Johnson collection.

† The claw flints and the little claw totem all came separately into the writer's hands for examination, and the suggestions as to their use are presented without even the knowledge of the owners of the specimens.

the Stone Grave race.* The fish was another most common totem among the southern tribes, which may account for the large number of fish forms found in the pottery of the graves.

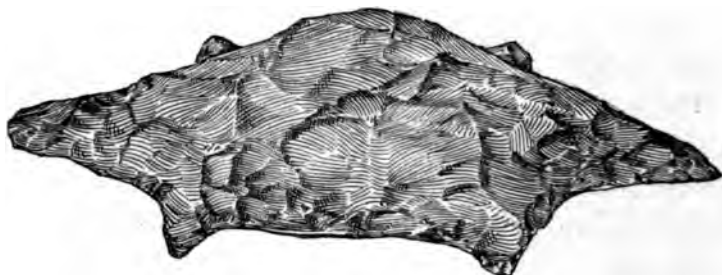


FIG. 157.—CHIPPED STONE TURTLE, SMITH COUNTY (ONE-HALF).†

To the list of rare and unique flints peculiar to this section,



FIG. 158.—CHIPPED FLINT DISC, STEWART COUNTY (ONE-FOURTH).‡

must be added the large flint disk found in Stewart county, Middle Tennessee, and illustrated in Fig. 158.

* In Cooper's entertaining novel, "The Last of the Mohicans," when Uncas, the Indian chief, was about to be put to death, he showed the figure of the *tortoise*, the emblem of the Delawares, tattooed upon his breast, and this emblem saved his life. The Delawares are called "the Children of the Turtle."—Chapter XXX.

† Author's collection.

‡ Hicks collection.

This remarkable specimen of lustrous black flint, is nine inches in diameter, only an inch and a quarter thick at the center, and tapers regularly from the center to its sharp rim or perimeter, like an ax blade, forming a beautiful and symmetrical disc. No explanation has been suggested as to its probable use. A smaller and rude specimen, somewhat similar in form, has also been found (Johnson collection).

It seems singular that the long, chipped scepters, the single and double claw totems, the disc, and many other fine flint and chert implements, have been discovered in two of the least fertile counties of the mineral belt on the western border of Middle Tennessee—Stewart and Humphreys. The Cumberland river, however, flows through Stewart, and Duck and Buffalo rivers through Humphreys, and in their rich, though sometimes narrow valleys, are to be found the remains of many settlements of the Stone Grave race. The material of which these fine implements were made also abounded in these counties. Doubtless other tribes, in different stages of development, have lived in the valleys of Tennessee and Southern Kentucky in past ages. They may have erected some of its ancient monuments, but it is manifest that the remains of the most advanced arts and industries found in Tennessee must be attributed to the industrious and progressive tribes that built the stone graves and erected the adjacent earth-works. They were the skillful flint and chert chippers, and the expert pottery makers, and shell engravers of ancient Tennessee.

We regret to close this chapter without further illustrations and descriptions of typical flints, especially of the varieties used in the mechanical industries, but the preparation of the engravings already presented has been a laborious task, fully one-third of them having been inserted in the manuscript since the chapter was originally written.

Collectors and archæologists of experience, however, who look with genuine interest upon new and rare types, we are satisfied, will at once recognize the rarity and unique character of many of the fine specimens engraved, especially of the mechanical and cere-

monial classes. They will probably agree with the writer in the opinion that in excellence of workmanship, and in beauty and variety of forms, they surpass the remains of art in chipped stone work of any other section of the Mississippi valley. We know of no antiques equaling them north of the stone and obsidian knives and flakes of the ancient Mexicans. These fine forms of the Cumberland and Tennessee valleys do not occur in the ancient territory of the Iroquois of the north, or of the Indians of Virginia, or of the north Atlantic coast, or in Canada. They seem to represent a state of society of a higher type than that of the Iroquois or Algonkin tribes, more advanced, indeed, than the probable status of the ancient Shawnees, the most advanced of the Algonkin tribes, and above the culture of the tribes east of the pueblos, at the period of early European settlement.

In 1837, a noted Indian chief of Northern Michigan, presented Henry R. Schoolcraft, the historian and archæologist, an "antique javelin" or spear-head of chert, of the ordinary form, seven inches long, with the remark that it "was one of the old implements of his ancestors."* Such specimens appear to represent the highest art in chipped stone work of the northern tribes.

Doubtless the more advanced tribes of sedentary southern Indians, whose large fortified villages, and whose manner of life, are described by the journalists of De Soto, and other early discoverers, must have been sufficiently devoted to agriculture, and horticulture, and to mechanical pursuits, to have required a greater variety of convenient stone implements. De Soto did not invade the territory of the Stone Grave race of Tennessee, but from the evidences of comparatively modern occupation it is not improbable that, at the period of his campaign, some of these old flint chippers and pottery makers of the village class of Indians were still residing within the fortified camps and stone grave settlements of the valley of the Cumberland.

* Schoolcraft, Vol. I, page 87.

CHAPTER VIII.

SMOOTH STONE IMPLEMENTS.

Grooved Axes—Celts—Adzes—Tool Handles—Chisels—Cutting Implements—Discs—
 —Spinning Whorls—The Art of Weaving—Paint Cups—Mortars and Pestles—
 Tubes—Whistles of Stone and Bone—Funnels—Rings and Ornaments—Tablets—
 —Cones—Perforated Tablets—Ceremonial Objects—Banner Stones—Spade-
 shaped Implements—Crescent Forms.

The ground or polished implements, ornaments and tools of the stone age in Tennessee, are not so numerous as the objects of chipped stone. Suitable materials for the former were not so abundant, especially in the limestone basin of the middle district, where the largest towns and settlements of the Stone Grave race were probably located; neither were the polished implements so easily made.

Ignorance of the uses of iron, and the scarcity of the malleable ores of copper, however, rendered it necessary that the industrious inhabitants of the Cumberland and Tennessee valleys should be well supplied with implements of stone of the various types; and many specimens of the smooth or polished classes, both of the ordinary forms, and of the rare and beautiful varieties, are to be found among the collections in Tennessee.

Grooved axes, hammers, celts, fleshers, chisels, knives, ceremonial implements, adzes, tubes, discs, stone rings, paint cups, mullers, beads, pendants, gorgets, amulets, and many other unnamed "relics" are well represented.

Nearly all of the materials for the fine specimens found in the limestone basin of Middle Tennessee, and in the western district, must have been transported from the extreme eastern borders of the state, or from other distant points in West Virginia, North Caro-

lina, or Alabama, a fact that attests the thrift and industry of the Stone Grave tribes in exchanging and bartering commodities.*

Many of the types of polished stone are similar to the specimens found in other mound sections, and show that relations more or less intimate must have existed during the prehistoric period between the various tribes of the Mississippi valley; but some of the Tennessee types seem to have belonged exclusively to the Stone Grave tribes, or other tribes that once inhabited the central and eastern valleys of the state. Several of the remarkable bird and boat-shaped forms of stone, and some of the beautiful objects of striped slate found in the North, are rare or unknown; the fine types of jasper found in Mississippi are also rare, but, as a rule, the Tennessee specimens of polished stone, especially the symmetric discs, rings, tubes, and ceremonial implements, are of very great interest, and probably exceed in numbers, beauty, and variety, the objects of the same class to be found in any one of the adjacent states.

We shall not devote much space or attention to the ordinary forms of polished stone "relics," common to this and other sections, and usually found among the remains of neolithic man, as our main purpose is to present characteristic types, especially of the higher class, and specimens when practicable, illustrating the ancient arts and industries, that students interested in the subject may be able to compare them with the antiquities of other sections, and may acquire more definite information as to the state of ancient society represented by them.

Typical examples of the grooved stone axes found in Tennessee and the states adjacent may be seen in Fig. 159. They are usually made of greenstone, diorite, or other hard stones. The grooves show plainly the methods of hafting them, by withes bound around them and fastened to the handles. Stone implements of the modern

* In the most populous mound districts north of the Ohio river, glacial deposits of gravel and bowlders were found almost every-where, furnishing ample and convenient supplies of granite, jasper, and other fine stones, for the aboriginal implement makers.

tribes are still occasionally found with wooden handles fastened in the same manner. The grooved or flat surfaces on the handle sides were fitted for wedging the handles.

The specimens found vary in size from little, light hatchets to large, unwieldy axes weighing seven or eight pounds. They were, doubtless, used for many mechanical purposes, as well as for weapons.* Several varieties of grooved stone hammers are also to be found in the Tennessee collections, and implements of the

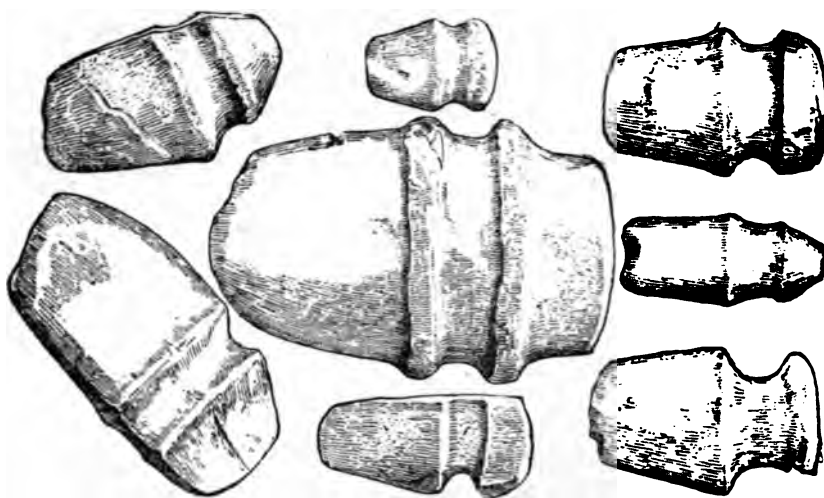


FIG. 159.—(GROOVED STONE AXES (ONE-FIFTH)).†

smooth celt class, without grooves, or with but slight traces of grooves, are among the most common types.

* Most of these forms of grooved axes are also found within the mound area north of the Ohio river. Nearly exact duplicates of some of them are also to be found among the stone implements of the Zunis and other tribes of the pueblos of New Mexico and Arizona. See illustration of similar forms in the Second Annual Report Bureau of Ethnology, pages 338-375. The cliff dwellers also used similar implements.

† For convenience in illustrating, Figs. 159, 160, and 163 have been reproduced in smaller dimensions from Colonel Jones's valuable work, *The Antiquities of the Southern Indians*. All or most of the types are found in Tennessee. We have several of them in our collection.

Fig. 160 represents some of the typical forms of celts or smooth stone axes. The varieties of this general form can be scarcely be numbered. Dainty little celts are found, too small to be held in the hands without handles. Others are as large, or nearly as large, as the largest grooved axes, and must have been strongly hafted. Mr.

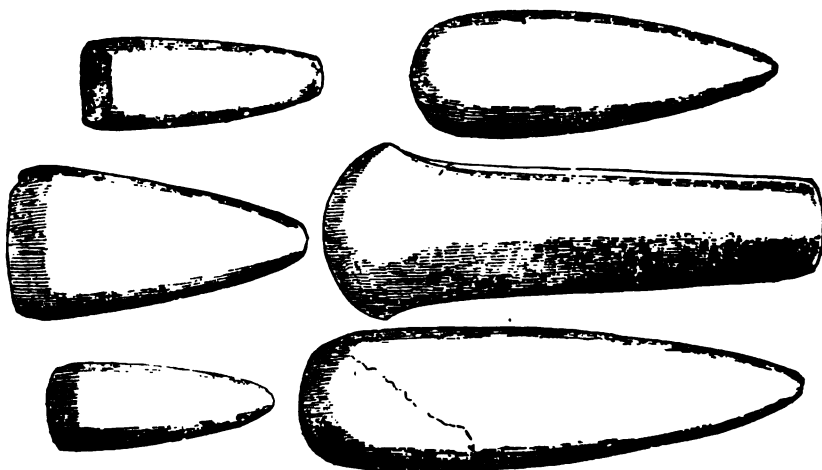


FIG. 160.—TYPICAL CELTS (ONE-FOURTH).

Isidor Bacherig and Mr. Viser, of Clarksville, Tennessee, have specimens of these large oval celts from thirteen to fourteen inches long, and weighing four or five pounds. There are also very large specimens of this class in the Historical Society's collection. Many of the medium sized celts were probably used, without handles, as fleshers or skinning implements.

In the collection of the Historical Society, there is a beautiful stone axe of dark, rich greenstone, of unusual size, nearly rectangular in form (Fig. 161). It is about eight inches long, four inches wide, and is shaped like a broad chisel or common chopping axe, with flat sides and square-edged rims. The blade has been ground to a sharp edge. It is not over three-fourths of an inch thick at the center.

Many of these axe and wedged-shaped implements were prob-

ably used with wooden and horn handles as chisels. Indeed, the great variety of forms and sizes, and the labor expended upon them,

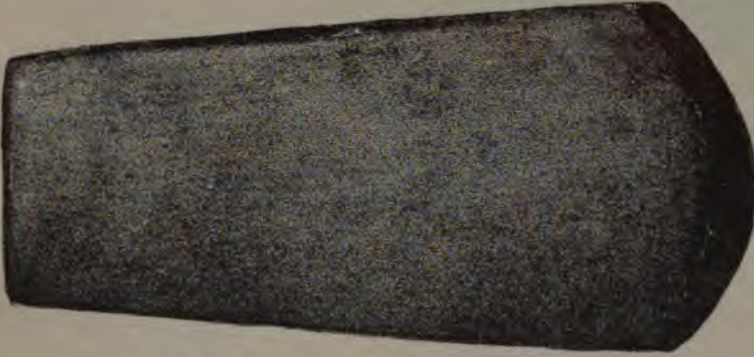


FIG. 161.—STONE AXE (ONE-HALF).*

suggest that they were probably used for a number of mechanical purposes. The hardest, and often the most beautiful, materials were selected in making them. We have one of brilliant red jasper. It seems singular that so few of these oval celts are



FIG. 162.—ANCIENT STONE HAMMER (ONE-THIRD).†

grooved, as many of them must have been used as axes. Various devices were probably adopted in hafting them.

In General Wilder's collection there is a stone hammer with a handle of tough withe, fastened securely to the center by a partial covering of rawhide. (Fig. 162.)

This ancient implement was found in a cave in the Ozark

* Historical Society collection.

† Wilder collection.

Mountains, of Arkansas, near Hot Springs. The edges of the hide covering, although partially decayed, bind the stone tightly, and keep the handle in place with the aid of a very slight depression around the center of the stone. Doubtless many of the large smooth celts and axes were thus hafted, originally, by being bound with hide coverings about the handles. There is another specimen in the Wilder collection that gives very valuable information as to the method of making these implements of hard stone in the prehistoric period, and illustrates the ingenuity of the native mechanics.

It is a typical celt or wedge-shaped implement of compact stone, found in East Tennessee, that has evidently been left in an unfinished state by some ancient workman, as it is evenly and entirely covered with small indentations or marks of hammering made in the process of perfecting its form. It has in fact been *bush hammered* or *pecked* into shape by some sharp implement, a pointed flint, or possibly a piece of hematite. It must have been very difficult to grind or polish these hard celts, axes, and other implements into shape, and this method of pecking or bush hammering was a much easier way of making them than the slow process of grinding or rubbing. After pecking them into shape, the final polishing work was probably done. We have a number of specimens that still show the fine and regular indentations of bush hammering. Many of the fine pipes were probably shaped in this way. The finest axe-shaped implement yet discovered in Tennessee is the beautiful specimen of polished greenstone, with a stone handle and double edged blade, found by Dr. Joseph Jones in a large sepulchral mound on the bank of the Cumberland river, opposite Nashville, and illustrated in Fig. 163.

The entire implement was cut from a single piece of stone, and is about thirteen and one-half inches long. The blade is over six inches in length. There is a hole in the end of the handle for suspension. The grave in which it was found contained the remains of a very large skeleton. An axe, similar in form, was discovered in York district, in South Carolina, and a third one, a little larger, but

not so beautifully made, was found, a few years ago, in Mississippi county, Arkansas, and is now in the collection of Mr. Morris, of that county.

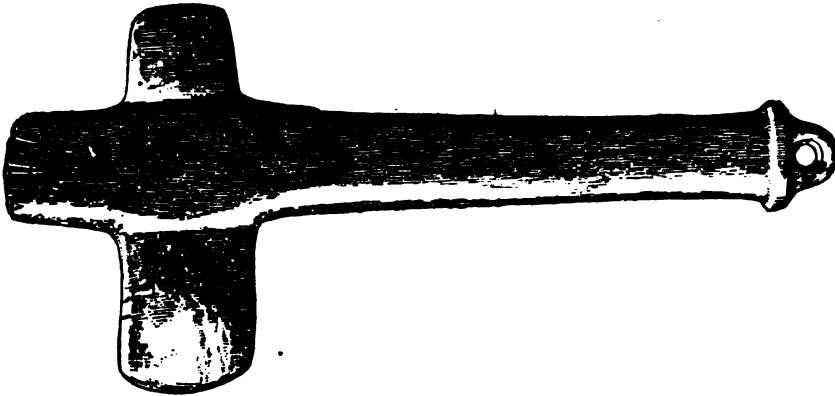


FIG. 163.—STONE AX, WITH STONE HANDLE (ONE-THIRD).*

The stone adze of metamorphic slate (Fig. 164) was found in a cave near Citico creek, Tennessee. Much labor must have been bestowed upon it, as the stone is very hard. It is one of the few specimens discovered with the handle end ground into shape to fit



FIG. 164.—STONE ADZE (ONE-HALF).†

its wooden socket. It must have been a useful implement in day. Adzes of this general form, securely bound to wooden dles, are frequently to be seen among the implements of the tribes of the Pacific Islands.

* Dr. Jones collection.

† Wilder collection.

It is sometimes difficult to separate the chisel shaped implements from the celts and adze and axe-shaped types. Good specimens of these general forms, of the smaller class of tools, are shown in Fig. 165. They are made of hard finely-polished stones of rich

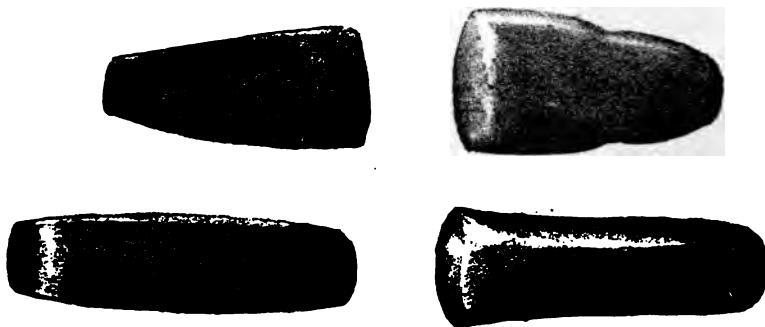


FIG. 165.—HATCHETS AND CHISELS (ONE-THIRD).*

colors. The little greenstone hatchet is slightly notched for hafting. The two short chisels were probably held by wooden or horn handles.

Very similar short stone chisels are found in the Swiss lakes,

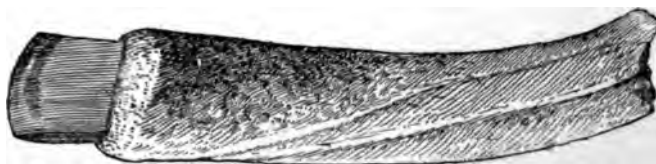


FIG. 166.—IMPLEMENT OF THE SWISS LAKE DWELLERS (ONE-HALF).*

securely fastened to deer horn handles, after the manner shown in Fig. 166. Many of the primitive inhabitants of Switzerland lived upon its lakes in rude dwellings constructed upon wooden piles, thus isolating them from the attacks of their enemies. Their implements, preserved from decay in the waters beneath, are found in

* Author's collection.

great numbers when the lakes are drained.* As will be observed, the Swiss stone implement is almost identical in form with our Tennessee types. These little chisels are very numerous. Not less than twenty-five or thirty implements of this class may be found in our collection, many of them finely finished, and of very beautiful colors. Some of them are almost as thin and symmetrical as a modern paper cutter. The Historical Society also has a number of them.

Fig. 167 illustrates other forms of chisels or knives. The rude knife was recently obtained in a stone grave near Nashville. The ornamented chisel was plowed up in an adjoining field.

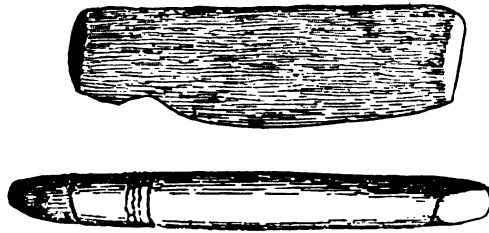


FIG. 167.—CHISEL AND KNIFE (TWO-FIFTHS).†

As might be expected, many common cutting implements of stone are found in or about the ancient settlements, or "relic beds." Three small specimens are shown in Fig. 168 (actual size). All were probably used with handles. Judging from its peculiar form, the little knife of chipped flint, with a very sharply ground edge, may have been used as a lance—possibly as a doctor's or medicine man's knife or lance. It was certainly made for some delicate cutting operation. Conveniently shaped stones that could be easily sharpened and utilized, frequently found a place in the aboriginal workshops or kitchens.

* We obtained a small collection of the prehistoric implements and pottery of the lake dwellers, including two horn handled stone chisels, at Lake Bienné, Switzerland, some years ago, when that lake was drained or partly drained.

† Author's collection.

The implements of compact shale, outlined in Fig. 169, were originally evidently irregular fragments of stone. The edges have

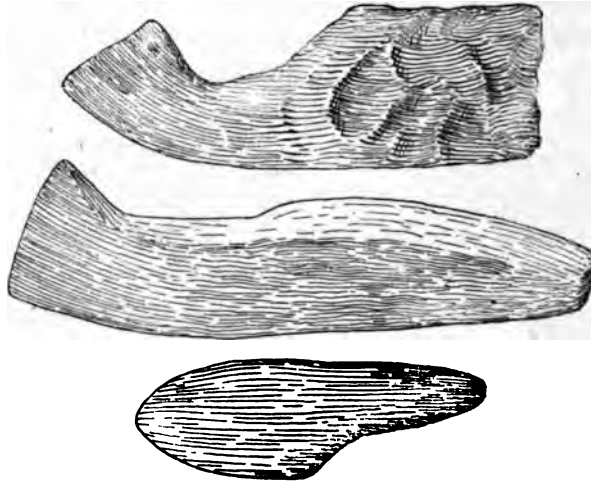


FIG. 168.—CUTTING IMPLEMENTS (ACTUAL SIZE).*

been rounded by use, and the natural blades sharpened with little

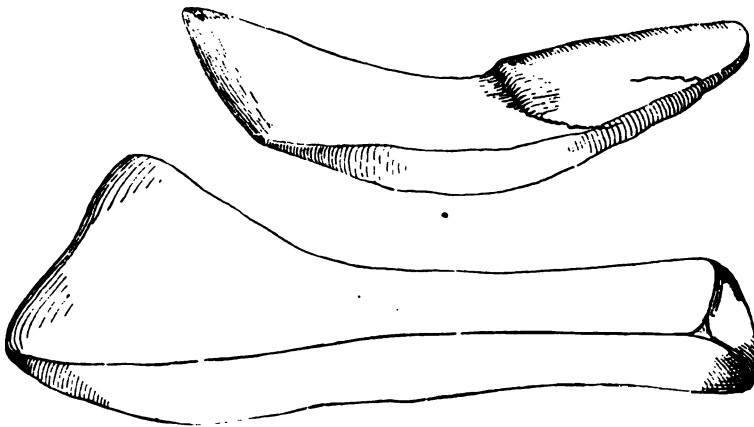


FIG. 169.—CUTTING OR SKINNING IMPLEMENTS (ONE-HALF).†

labor, and without changing their general forms. They seem well fitted for skinning hides, and other useful purposes.

* Author's collection.

† Johnson collection.

Many grooved stones have also been found that were used in the old work-shops, perhaps to sharpen or grind the chisels and knives. A flat square specimen of this character, of fine-grained sandstone, was picked up in the Noel cemetery, and is represented in Fig. 170. We can not be certain that it was intended as a sharpener, however, but it seems to have been shaped for some special work. The grooves are slightly furrowed. Somewhat similar grooved stones were used by some of the modern tribes to straighten and round their arrow shafts, by bending and rubbing. The sandstone grooves are well-fitted for smoothing the rough edges and knots on the wooden shafts.

Considered as a class, the most beautiful and symmetric an-

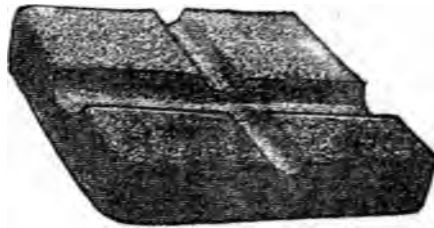


FIG. 170.—SHARPENING OR SMOOTHING STONE, NOEL CEMETERY (ONE-HALF).*

tiques of polished stone are the discs. Very great numbers of them must have been used in ancient Tennessee. They are, in fact, a specialty of this section, nearly all of the fine specimens that enrich the public and private collections of other states, having been found in the valleys of the Cumberland and Tennessee rivers. Upon two shelves in our collection we have about fifty perfect specimens of the finer classes. Typical examples of these discs are shown in Fig. 171, but they are found in almost innumerable varieties of forms and sizes. The greater portion of them are made of quartz, either nearly pure or in some of its combinations; a fact that renders it difficult to interpret their use, as quartz is one of the hardest, as well as one of the most easily fractured stones. How these discs were

* Author's collection.

made of this hard substance, and in such exact forms, and what were their uses, are among the enigmas of archæology.

There are no specimens of aboriginal stone work, not even the pipe carvings, that show more skill or cost more labor. The pipes were usually made of steatite, but the discs were carved, ground, and polished from the hardest materials. It would require the practiced eye and hand of the most skillful modern lapi-

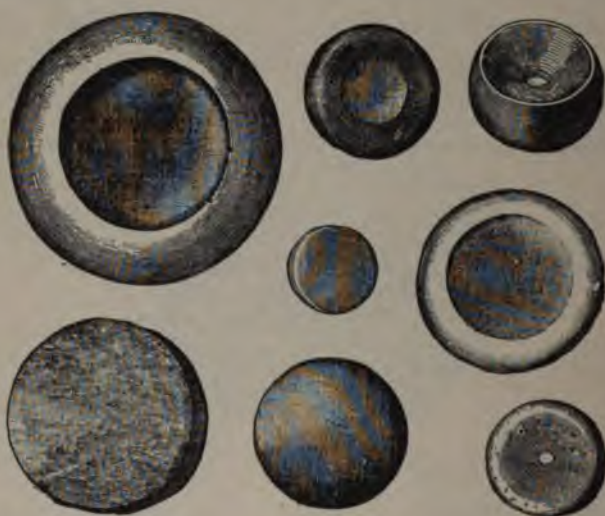


FIG. 171.—TYPICAL STONE DISCS (ONE-FOURTH).

dary to duplicate some of them. We doubt whether the average discus of the old Greeks was more perfect in form.

The stones were selected with special reference to beauty and color. Many of them are of pure white translucent quartz, and of richly colored quartzite. Bluish white chalcedony, and beautiful varieties of calico or pudding stones were also utilized. In a grave of the Noel cemetery we obtained a fine specimen made of rich cannel-coal, with a most brilliant surface polish. The large discs are usually bi-concave, and from five to six inches in diameter. They are rarely perforated. This is a characteristic of about one-half of the smaller specimens.

It is generally supposed that the large discs were used as gam-

ing stones, as similar stone wheels or quoits were used by a number of modern tribes for this purpose. Catlin mentions a game ("tchung kee") which they played with poles and a stone ring about three inches in diameter.* Adair, who spent considerable time among the southern Indians, also describes their manner of playing the game of "tchung ke."

It was played upon a piece of clear level ground, by two or four or more players. They used a stone "two fingers broad at the edge, and two spans round" (about the average size of the large stone discs now found in Tennessee). Each player had a pole about eight feet in length, smooth and tapering at each end. The players started abreast at a certain distance from the playground, when one of them rolled the stone on its edge through the grounds. Each one darted his pole after the stone. If one struck or touched it, the owner counted two. The game must have been very fascinating, as the Indians often staked their wearing apparel upon the result.

Adair states that "all the American Indians are much addicted to this game, which appears to be a task of stupid drudgery; it seems, however, to be of early origin. The hurling stones which they still use have been from time immemorial rubbed smooth on rocks, and with prodigious labor. They are all kept with the strictest religious care, from one generation to another, and are exempt from being buried with the dead. They belong to the town where they are used, and are carefully preserved."†

Du Pratz, and several other writers, describe similar pastimes among other tribes, and Bartram gives accounts of the "chunky yards" of the Creeks, where these games were played. There can, therefore, be little doubt but that many of the large discs or "discoidals" were gaming stones.

* Smithsonian Report, 1885, Part II, page 304.

† History of the American Indians (Adair), page 402. The large "hurling" discs are rarely found in the stone graves in the vicinity of Nashville. So far as we can learn, but a single one has been discovered buried there, and that had been broken into two pieces. It was found by John Blunkall.

The cheese or barrel-shaped disc of heavy granitic rock, illustrated in Fig. 172, seems well fitted for use as a gaming or hurling stone. Like most of the large discs of ordinary forms, it can be grasped conveniently in the hand. It was found by Thomas Chilton near the mouth of Nickajack Cave, Tennessee. It is three and one-fourth inches high, four inches in diameter, and weighs nearly four (4) pounds. Large specimens of this type may be seen in the Wilder collection, and in the collection of the Athenæum, at Columbia, Tennessee.

Many of these beautiful and symmetric discs, however, have

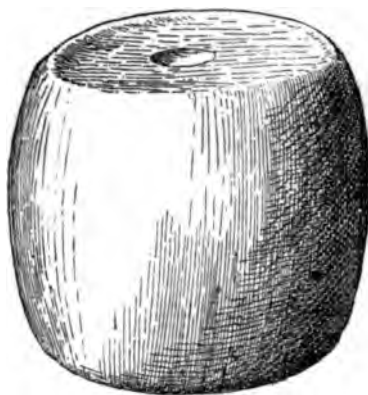


FIG. 172.—BARREL OR CHEESE-SHAPED DISC (TWO-FIFTHS).*

peculiar forms, and are unfitted for rolling in direct lines. Some of them have irregularly beveled sides, and were evidently intended for other uses, perhaps for other methods of gaming.

Some of these unusual types are presented in Fig. 173. They are from the stone graves and cemeteries near Nashville. The disc in the center, of cannel coal, is as symmetrical and as brilliantly polished as a piece of velvet-black jet from Tiffany's. The disc on the right, with two small artificial depressions on it, is of nearly pure yellowish quartz. The third is of compact silicious stone. All are smooth and flat on the lower sides. Their forms seem to

* Author's collection.

suggest some special uses. Some of them resemble the well-shaped weighing stones, found in the old groceries and apothecary shops of Pompeii. Possibly some of them were for similar uses in the aboriginal trading shops. Dr. J. M. Safford, of Vanderbilt University, many years ago discovered a handsome bi-concave quartz disc, with a spherical ball of the same stone, that fitted exactly into the cavity on the side of the disc. Discs nearly spherical in form are not uncommon, and occasionally an exact sphere is found. The Rev. C. F. Williams has a quite perfect stone sphere, four (4) inches in diameter, in his collection.

As one views the varied forms and rich colors of these interesting objects grouped in a cabinet, they seem, like some of the graceful vessels of pottery, to represent a better state of art and



FIG. 173.—UNUSUAL TYPES OF DISCS (TWO-FIFTHS).*

society than the accepted status of aboriginal life in the Mississippi valley. We have constantly to bear in mind the intuitive art instinct, natural to the North American Indians, to reassure ourselves that they are not the work of some superior and different race.

There are also many little discoids, too large for beads, and too small for ordinary gaming stones, that must have been intended for special purposes. One is occasionally found rich enough in color and finish to adorn a collection of gems. Doubtless, some of them were used as spinning implements or spindle whorls.

Spinning and weaving have been among the earliest industries of primitive man, and traces of the simple implements used are found among the antiquities of nearly all countries. Dr. Schliemann discovered hundreds of them among the ruins of Troy. We have

* Author's collection.

a number of the pottery whorls used by the ancient lake-dwellers of Switzerland that do not differ in general form from these Tennessee types from the graves. The ancient terra-cotta whorls of Mexico and Peru are about the same size and weight. It seems, indeed, quite certain, from the remains of cloth found in the caves of Tennessee and Kentucky, and from the tracings of woven fabric impressed upon the vessels of clay, from the graves, that the distaff and whorl were not unknown to the early inhabitants of Tennessee.

From historic accounts, we learn that some of the modern southern Indians had some knowledge of the art of weaving the coarser grades of fabric. Adair states that "the Muskohge or 'Creeks' passed the woof with a shuttle; and they have a couple of threadles, which they move with the hand, so as to enable them to make good dispatch, something after our manner of weaving."* Du Pratz also describes the method of weaving practiced by the Natchez Indians: "They plant two stakes in the ground," he says, "about a yard and a half asunder, and having stretched a cord from one to the other, they fasten their threads of bark double to this cord, and then interweave them in a curious manner into a cloak of about a yard square, with a wrought border around the edges."†

The remains of ancient cloth discovered in the caves, and the impressions upon pottery from the graves, have been of the coarser grades of fabric.‡

* History of the American Indians, page 422.

† History of Louisiana, Vol. II, p. 231. London, 1763.

‡ From the description given by Judge Haywood of the cave or mummy burials, the remains discovered were wrapped with skins, mantles and cloths of feathers, and coarse fabrics made from the inner barks of trees.—Natural and Aboriginal History of Tennessee, pages 163, 166, 191, 338; Aboriginal Remains of Tennessee, pages 1, 6. La Salle tells us that when he visited the large Indian town of the Taensas, upon the Lower Mississippi, he found the men wearing white cloaks woven of the inner lining of mulberry bark.—La Salle (Parkman), page 281. De Soto's journalists report that the natives of Alabama, in 1540, "wore mantles made

It is quite probable that the progressive villagers, who seem to have made considerable advances in other arts, and who used the various convenient implements found in the graves, acquired some knowledge of the art of weaving the finer grades of textile fabrics, but we have no positive information of this fact.

Unfortunately, the original fabric of cloth used by the mound building tribes has wholly disappeared. In our explorations, we have found in the graves no traces of cloth that could be identified with certainty. Perhaps some of our assistants may have unearthened fragments of cloth, but they were unobserved or unreported. Dr. Jones states that "in the numerous stone graves which I have opened, traces of the garments which originally surrounded the bodies could be discovered in only one of the most perfectly constructed stone coffins." No further particulars are given.*

The stone sepulchres were too damp and too rudely constructed to preserve the remains of ancient cloth fabrics, but the impressions left upon the fragile but enduring vessels of pottery have enabled us to obtain much valuable information as to its quality and texture.

Hundreds of vessels are found impressed with the coarser grades of cloth and matting used in supporting and molding the large vessels of pottery. A good illustration of these imprints may be seen upon the large vessel from Nashville in Plate X. Fig. 174 also represents an impression of ancient woven work upon a vessel from a mound in Jefferson county, Tennessee. It is very similar to the fabric traced upon the Nashville pottery.

A piece of diagonal fabric is shown in Fig. 175 from an impression upon a vessel from Polk county, Tennessee.

of the inner rind and bark of trees, and others of a species of grass, which, when beaten, was not unlike flax.—Conquest of Florida (Irving), page 230.

* *Aboriginal Remains*, page 6. Upon the copper ornament or cross found by Prof. Putnam in a grave upon Zollicoffer's Hill, near Nashville, he remarks that there were "slight evidences of its having been in contact with a fine woven fabric, thus showing that this ancient people, who were well advanced in the domestic arts, also possessed the knowledge of weaving."

These illustrations of fabrics are from the Third Annual Report of the Bureau of Ethnology, where this subject is most intelligently considered by Mr. W. H. Holmes in an article upon "Prehistoric Textile Fabrics," page 39. Mr. Holmes has taken impressions in clay from the molds of the cloth fabric left upon the ancient pot-

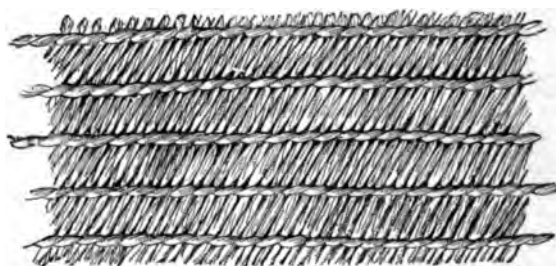


FIG. 174. - FABRIC IMPRESSED UPON POTTERY.

tery, and thus the cords and threads of the cloth are brought out in relief, and preserved in the casts of clay, showing the exact texture.*

As stated heretofore, it seems probable that some of the sym-

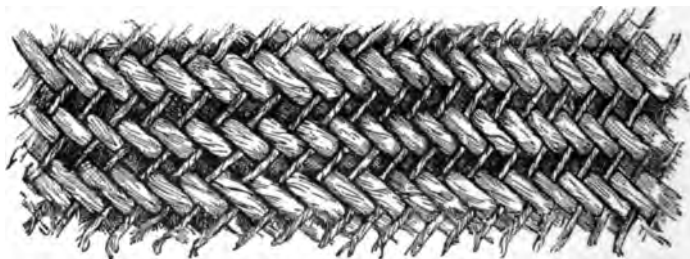


FIG. 175. - DIAGONAL FABRIC IMPRESSED UPON POTTERY.

metric, little stone discs found in the graves and ancient settlements were *spinning whorls*. Good examples of these whorls, made of highly polished greenstone and diorite, are shown in Fig. 176. The natural objects are exact and perfect in form. Several

* We are indebted to Major J. W. Powell, director of the Bureau, for kindly furnishing electrotypes of these illustrations.

varieties of these fine whorls, of larger and smaller sizes, might be presented. The holes in the centers are carefully drilled. Many of them are funnel-shaped, or countersunk, as if made to be fitted to a wooden stick or spindle, or to enable the thread to be fastened with a wedge or pin. Mr. Conant, in his investigations among the ancient cemeteries of Missouri, discovered a pierced



FIG. 176.—SPINNING WHORLS (ONE-HALF).*

wheel of earthenware which he regarded as probably a “spindle-whorl.” †

The forms of the pottery whorls of the ancient lake dwellers of Switzerland (from Lake Bienné) are illustrated in Fig. 177. Perforated stones or whorls of a ruder character, and of irregular shapes, are also found in the stone graves and about the ancient “relic beds” in the vicinity of Nashville—wheels too large for

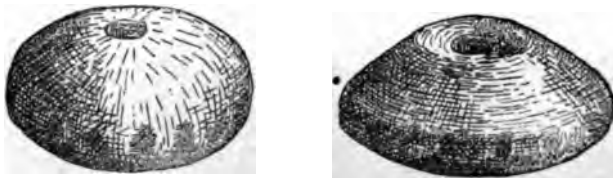


FIG. 177.—ANCIENT SWISS SPINNING WHORLS (TWO-THIRDS).‡

beads. They are generally made of sandstone, and look like the pierced wheels found in considerable numbers in the California graves. Some of the large types may have been perforated hammers. Specimens of this class are shown in Fig. 178. The perforations are countersunk.

* Author's collection.

† Footprints of Vanished Races, page 94.

‡ Author's collection.

Fig. 179 represents other forms of small discs of the finely finished class. The smallest specimen is of brilliant translucent quartz. The fact that a considerable portion of these fine "wheel stones" are not *perforated* seems to be an indication that the pierced wheels may possibly *not* have been used as spinning whorls. The flattened sphere form is a very familiar one. It occurs in various

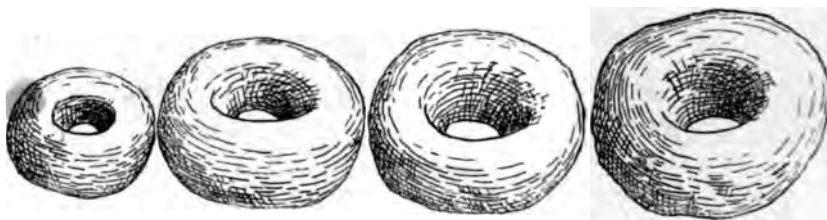


FIG. 178.—PERFORATED DISCS OR WHORLS (TWO-THIRDS).*

sizes. We have beautiful specimens three or four inches in diameter. The peculiar circular depressions on two of the discs will be noticed. Some of these depressions look like mechanical pivot sockets.

One of the specimens is marked with incised cross-lines, but

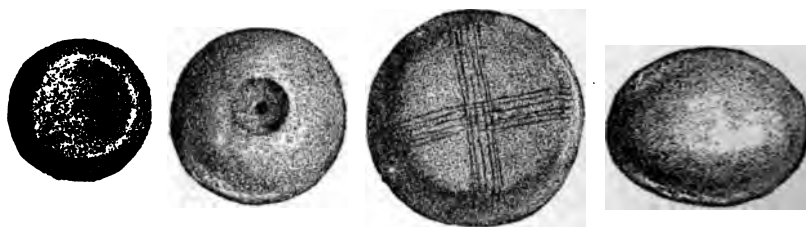


FIG. 179.—SMALL DISCOIDS (TWO-THIRDS).*

we do not regard this figure as a symbol of any special significance beyond mere ornamentation. Prehistoric cross-shaped ornaments and symbols will be considered hereafter.

One of the most remarkable specimens of the disc shape is illustrated in Fig. 180. It is a symmetrical disc of clay iron-stone

* Author's collection.

from Carthage, Alabama, evidently artificial in its form, as it belongs to a well known type of discoids quite common in Alabama, Mississippi, and Tennessee. We have a number of similar forms. Since it left the hands of the native lapidary, however, in its *present form*, it has become coated over its entire surface, by *some natural process*, with a thin layer of lustrous limonite or hematite. Parts of this brilliant coating have scaled off, and left it, as it appears in the engraving—an artificial disc—with a natural coating of iron. We are indebted to Prof. R. B. Fulton, of the University of Mississippi, for this unique specimen.

Fine general types of discoids will be found in the collection of the Tennessee Historical Society; also, in the Smithsonian Institu-

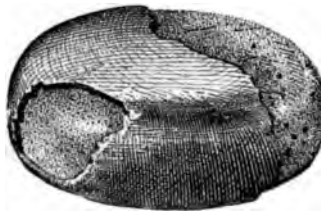


FIG 180.—ARTIFICIAL DISC COATED WITH IRON (ACTUAL SIZE).*

tion, the Cincinnati Art Museum, the Nicklin collection, General Wilder's collection, and in various local cabinets. The majority of them are from Tennessee or sections adjacent. There are many fine specimens in the Johnson collection, and in the Douglass collection, in New York City. Captain Johnson recently paddled his canoe down the Caney Fork river in search of "relics," and, to our surprise, brought back about twenty-five "discoidals," ten or twelve of them of the largest size, and very beautiful, showing how numerous these discs must have been in ancient Tennessee.

From the large number of small discoids recovered from the graves and cemeteries, it is clear that these interesting objects were made and used by the industrious villagers long before the discovery of iron.

* Author's collection.

large discs, or a considerable portion of them, we think, were also probably the work of the same Indians, or closely allied tribes: but nearly all the native tribes appear to have used somewhat similar gaming stones.

There is a class of stone discs found in Alabama and Georgia, and occasionally in Tennessee, of the forms represented in Fig. 181. We call them "plates," as they are flat, and quite different from the ordinary discoidals. These specimens are from Lauderdale

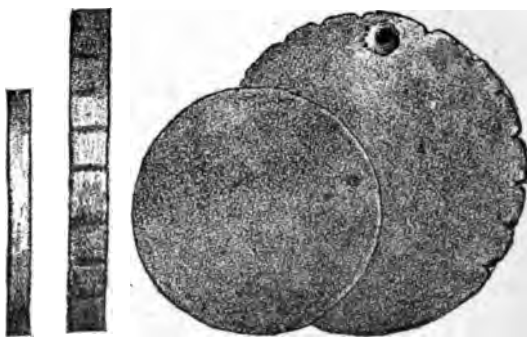


FIG. 181.—DISCS OR PLATES (ONE-FOURTH).*

county, near Florence, North Alabama. They are made of fine sandstone, and are respectively five and six inches in diameter. The noticeable notches on the rim of the large plate, running regularly, but not entirely around it, are usually found on the large discs, and probably had some special significance. It is singular that the countersunk holes at the top of the disc do not entirely pierce the stone. Two good examples of these stone plate forms were found in a mound on the Black Warrior river, in Alabama, and are illustrated in the Smithsonian publications.† And a fine specimen from the Tumlin mound, in Georgia, appears in Colonel C. C. Jones's *Antiquities of the Southern Indians* (Plate XXII). A

* Author's collection. The finest specimen of the disc plates yet discovered is illustrated in the next chapter (Fig. 236). The serpent design is engraved upon it. Smithsonian Collection (Rau), page 3.

specimen from East Tennessee is also illustrated in the Second Annual Report of the Bureau of Ethnology. Colonel Jones was of opinion that these objects were used for sacred or ceremonial purposes. Their presence in the mounds seem to confirm this view. Some of the plainer forms, we think, were probably used for domestic or culinary purposes. We have discovered a rude flat plate, of



FIG. 182.—“PAINT CUP,” WITH PESTLE, FROM NEW MEXICO.*

similar form, ten inches in diameter, in one of the old cemeteries near Nashville. Its sides are as flat and smooth as the Alabama plates.

Among the suggestions as to the uses of the bi-concave or saucer-shaped discs, we notice they are frequently labeled “paint-cups” by collectors. Many of them seem well fitted for mixing and holding paints.

A well-shaped disc, apparently of the ordinary Tennessee pattern, from New Mexico, with “a paint-pestle” in it, is illustrated in the Fourth Annual Report of the Bureau of Ethnology (Fig. 182), and designated a “paint-cup.” The pestle has a hole in the side,

* National Museum.

probably intended to hold the dry paint. We are satisfied, however, that most of the symmetrical bi-concave discs were probably not designed for paint-cups.

Ruder forms of discs, concave or cup-shaped on but one side, are occasionally found, that were evidently used for mixing paints or other materials.

A specimen of this character, from near Nashville, with the little stone muller found with it, is represented in Fig. 183. It is made of hard metamorphic stone, and has evidently been pecked



FIG. 183.—STONE PAINT CUP (ONE-HALF).*

into its present form by some sharp implement. It does not belong to the ordinary discoidal class. It is irregular in form, and its base is nearly flat. It is so different, in fact, in shape and material, from the bi-concave types, that it offers very good evidence that the latter were not "paint-cups." Most of the large "gaming discs" have also thumb-holes or central depressions on the sides, which would interfere with their use as paint-cups. Well-formed little cup-shaped vessels of stone, very suitable for holding and mixing paints, and probably intended for that use, are also frequently found in the graves and cemeteries.

Two of them are represented in Fig. 184. The round bowl-shaped cup of compact limestone, from the Noel cemetery, is as nicely hollowed out, and finished, as if made to hold the tattoo

* Historical Society collection.

rouge upon the toilet-table of an Indian princess. The Historical Society has one of dark-red jasper.

Dr. J. F. Grant, of Pulaski, Tennessee, has a fine specimen, of yellowish stone, ornamented in relief with birds'-claws (Fig. 185).



FIG. 184.—“PAINT CUPS,” DAVIDSON COUNTY (ONE-HALF).*

A delicate little stone pestle, with a well-ground end, found near it, stands in the bowl. Little bowls of pottery-ware, hollow iron-stone nodules, and rude and accidental forms of cup-stones, were also doubtless used for holding paints, or for similar purposes, as they are found about the old cemeteries, and sometimes contain the remains of paint or some coloring matter. We can only ap-



FIG. 185.—PAINT BOWL AND PESTLE (TWO-THIRDS).†

proximate the uses of some of these objects. They may have been intended for salt holders, or other conveniences in the domestic economy of these villagers.

Stone bowls of a larger type have also been discovered in Tennessee and the adjacent states. Those found in the eastern section

* Author's collection.

† Dr. J. F. Grant's collection.

and in the Carolinas have usually been made of steatite—a fire-proof stone easily worked. A well-shaped limestone vessel twenty-two inches in diameter, found in a mound in Northern Mississippi, is illustrated in Jones's *Aboriginal Remains*, page 144. Among the antiquities of Utah and New Mexico, large stone mortars or "metates" are quite common. Similar vessels were also, doubtless, used by the industrious farmers and villagers of the Stone Grave race, but, being too large for burial in the graves, they have not survived the waste of time and fire. They were probably also re-

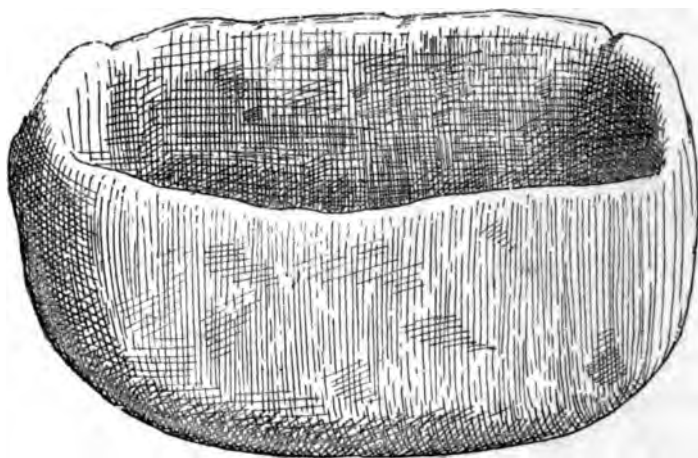


FIG. 186.—STONE MORTAR.*

garded as family property in the communal houses, and, therefore, were not buried with the dead as *individual* effects.

"Maize pestles" are found in abundance, showing that mortars must have been in use. Some of them may have been made of hard wood. Rude stones were also, doubtless, hollowed out and utilized as mortar cavities.

One of these large bowls of limestone, found at Hickman's Ferry, on the Cumberland river, below Nashville, and probably used as a maize mortar, is shown in Fig. 186.

Examples of the forms of stone pestles quite common in Ten-

* Johnson collection.

nessee, may be seen in Fig. 187. We have a half a dozen good specimens in our collection. Long, solid cylinders, or pestle-shaped implements, carefully made of hard stone, that were probably intended for pounding maize or beans, have also been discovered. They may have been suspended from the elastic limbs of trees in

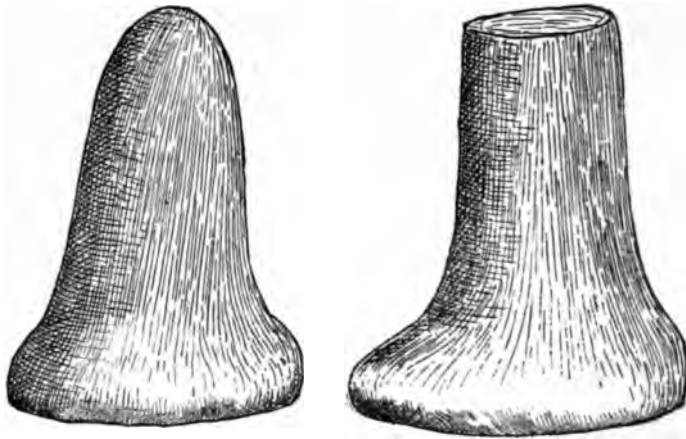


FIG. 187.—STONE PESTLES.

the process of pounding or churning, after the custom adopted by some of the tribes of the Pacific coast. General Wilder has one of these large, round pestles, about two inches in diameter and nearly two feet long—a fine specimen, very similar to the types found in California..



FIG. 188.—STEATITE TUBE, SUMNER COUNTY (ONE-SIXTH).*

Long cylinders or “telescopes” are also found in Tennessee, very carefully drilled with holes. Fig. 188 illustrates one of the steatite tubes, in the collection of the Tennessee Historical Society. It was found in Sumner county, Tennessee, near the ancient earth-works at Saunderville.

* Historical Society collection.

It is about twenty-three inches long and two and one-half inches in diameter. The hole drilled through it is about three-eighths of an inch in diameter, and is uniform in size throughout its entire length, excepting at one end, where the opening is wider (one and one-half inches) and funnel-shaped. This heavy implement, or the material of which it was made, must have been transported three or four hundred miles from its native bed on the borders of North Carolina. Mr. D. R. Coward, of Clinton, Tennessee, has kindly sent us a sketch of a similar steatite tube recently plowed up near Clinton. It was, unfortunately, badly broken.

A tube of simpler form, in the collection of Rev. C. F. Williams, of Maury county, Tennessee, is illustrated in Fig. 189.



FIG. 189.—STEATITE TUBE, MAURY COUNTY (ONE-SIXTH).*

It is seventeen and three-fourths inches long, and weighs nearly nine pounds. Its outside diameter is three inches at the large end, and about a half inch less at the small end. The bore is about a half inch in diameter at the latter end, increasing to an inch and a quarter at the large end. Since the engraving (Fig. 189) was prepared, Mr. W. E. Myers, of Carthage, Smith county, sent us a very similar tube for examination. It is about an inch less in outside diameter and a half inch longer than the Williams tube.

A fine specimen of polished steatite of the hour glass or dice box form of tubes is photo-engraved from the original in Plate XV. (Author's collection.) It is eight inches long, and about two inches in diameter at the ends. The openings at each end are about an inch and a half in diameter, are funnel shaped, and taper to about a half inch at the center. The inside surface shows that the holes were made by a gouge or some sharp instrument

* Rev. C. F. Williams collection.

that has left traces of furrows upon it, and not by a rotary drilling.*

On opposite sides of one end of the stone there are five little arrow or angle-shaped hieroglyphs or symbols carefully carved, intended probably to represent some totemic idea, or possibly the name or sign manual of its ancient owner. Markings or symbols of ownership upon the implements of primitive races are not uncommon.†

Since this tube was photo-engraved, we have obtained a very fine and a much larger specimen of the same character. It was found by "Uncle Arthur," one of our "explorers," in a stone grave of the Noel cemetery, showing that these interesting implements were probably made and used by the inhabitants of the ancient town or city located there.

It presents additional evidence that the best art of ancient Tennessee must be attributed to these people. The larger tube has small holes on the side near each end, probably intended for hanging cords. These large tubular objects bear some resemblance to the tube pipes of the California Indians—illustrated in the government reports.‡

It will be observed, however, that the bore in each tube is different, and peculiarly formed. None of them are fitted for convenient use as pipes, and two of them are larger and heavier than the largest calumet pipes known. Somewhat similar stone tubes were used by the California Indians as medicine, healing, or cupping tubes, and these Tennessee tubes may have been used for similar purposes.||

* A beautiful tube of this form, found in Georgia, is illustrated in *Antiquities of the Southern Indians* (C. C. Jones), page 359.

† *Prehistoric Times* (Lubbock), page 11.

‡ *Smithsonian Report*, 1886, Part I, Plates XV and XVI, where the hour-glass form and other tube forms may be seen. See also Wheeler's *Survey*, Vol. 7, page 125.

|| Vanegas, in his history of California, mentions the use of *stone tubes* by the medicine men of the California Indians, and states: "One mode was very remarkable, and the good effect it sometimes produced heightened the reputation of the physician. They applied to the suffering part of the patient's body the *chacuaco*, or

The ancient inhabitants of California and the Far West, and the inhabitant of the Mississippi valley, appear to have adopted many similar habits and customs.

Judge Haywood, whose History of Tennessee sometimes seems more like a romance of wonderful stories than a history, gives a most remarkable description of one of these tubes of the hour-glass form, discovered many years ago near Rogersville, Tennessee. He says: "When the stone trumpet is blown through, it makes a sound that can be heard perhaps two miles," and that "probably it was used for similar purposes to those for which the trumpets of the Israelites were used, namely, principally to convene assemblies, and to regulate the movements of the army." "But a more important question," continues the Judge, "is whence could those who made the trumpet have known its properties and use? They could not have attained that knowledge through the large horns of animals; there were none such here, or they never would have made this stone trumpet. The maker must have learned its use from some nation that employed the trumpet in sounding charges, or for giving directions to march, or to stop the pursuit of an enemy." Three full pages are thereupon devoted by the learned judge to an argument that "this nation must have been the Israelites of Judea." *

We have exhausted our blowing powers upon two similar "stone trumpets" in our collection, without eliciting any satisfactory response in the way of music or noise, and we scarcely think it possible that these tubular objects could have been designed "for martial music," as stated.

a tube formed out of a very hard black stone, and through this they sometimes sucked, and other times blew, but both as hard as they were able, supposing that thus the disease was either exhaled or dispersed. Sometimes the tube was filled with wild tobacco, lighted, and here they either sucked in or blew down the smoke, according to the physician's direction; and this powerful caustic, sometimes without any other remedy, has been known entirely to remove the disorder."—Vol. I, page 97. London, 1759.

* Natural and Aboriginal History of Tennessee, page 210.

We may feel assured, however, that the aboriginal Tennesseans were not without musical instruments. The tube or whistle of dark gray steatite, eleven and one-half inches long, represented in Fig. 190, never fails to respond in ample volume to a good pair of lungs, although not always in harmonious notes. The form of this interesting tube clearly indicates its use. It was plowed up in a field in Pleasant Cove, Warren county (Middle Tennessee), by Mr. John Blanks, and presented by him to its present owner, Dr. Thomas Black, of McMinnville, Tennessee, who kindly loaned it to the writer. The sectional view shows its interior construction, and the artistic and mechanical skill with which it was made. This fine relic ap-

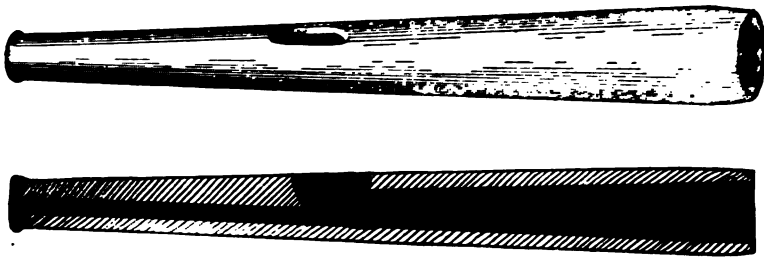


FIG. 190.—PREHISTORIC STONE WHISTLE, WARREN COUNTY ONE-THIRD.

pears to be unique. We have no knowledge of a duplicate. Hollow bone whistles, constructed upon somewhat the same principle, and with the elliptical holes on the side, were very common among the Far West tribes. The California tribes and the cliff dwellers used them, and a number of engravings will be found in the government reports illustrating them.*

Fig. 191 (from Dr. Rau's illustration) shows the general form of the bone whistles of the California tribes.

We have also in Tennessee antiques, akin to the stone tubes and hour-glass forms, which we have designated "funnels." A specimen seven and a half inches long, carved from light gray steatite, is represented in Fig. 192.

* Smithsonian Collection. *Bull.*, page 64; Smithsonian Report, 1890, Part I, Plate XXVI.

It was found on an island in the Tennessee river, near Chattanooga. It does not appear to have been intended for use as a pipe, as the opening at the large end is wide and flaring like a funnel, and not bowl or pipe-shaped. The small end is not well fitted for a



FIG. 191.—BONE WHISTLES.*

stem, but a small quill or hollow bone might be conveniently inserted there.

An object of the same general character, carved from fine sand-



FIG. 192.—STEATITE "FUNNEL" (ONE-THIRD).†

stone, was recently discovered in exploring the earth-works at Lebanon, Tennessee, by Mr. D. G. Charles.

* Smithsonian collection.

† W. R. French collection.

Outlines of the front and sides, and of the funnel-shaped opening, are shown in Fig. 193. It is nearly five inches long. The major axis of the elliptical opening is about two and one-half

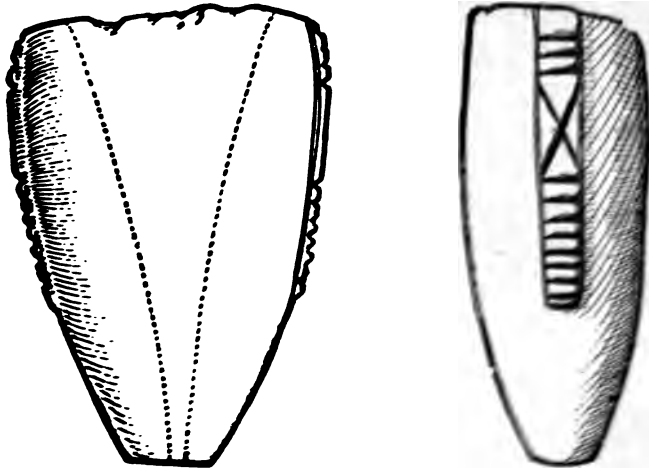


FIG. 193.—SANDSTONE "FUNNEL," LERAXOS WORKS (ONE-HALF).*

inches. The ornamental work on the sides has been most skillfully and artistically executed. The ends of the funnel have a fine surface polish, but the sides are smooth and plain, although symmetrically rounded.

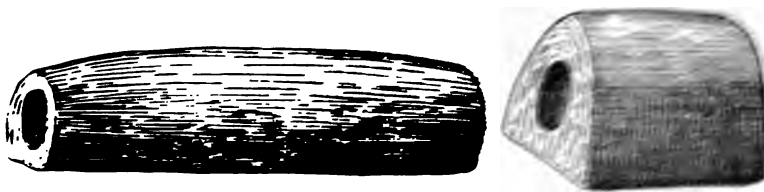


FIG. 194.—STONE TUBES. THREE-FIFTHS.

We can only conjecture the uses of these peculiar objects, but they seem well fitted for some domestic or mechanical purposes. They may, however, have been used for smoking or for medicine.

* Author's collection.

tubes. One of the long, hollow cylinders, shaped like an hour-glass, would form two of these funnels, if divided in the middle, into two parts.

Fig. 194 illustrates two tubes or perforated objects of stone, from the vicinity of Nashville, of smaller sizes and of a different class. The larger specimen is of green stone (Historical Society collection); the smaller is steatite (author's collection). In the Johnson collection, there is an example of the latter form, of bright red jasper.

The symmetrical rings of stone are also among the enigmas from the stone graves. Occasionally, one of our "explorers" brings in a specimen that looks as if it might have come from a

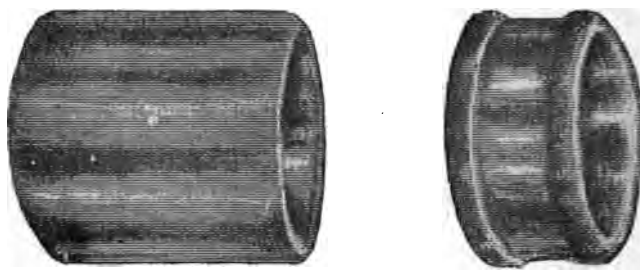


FIG. 195.—STONE RINGS (TWO-THIRDS).

modern jewelry or toy store rather than from one of these rude sepulchers. Fine types are also found in East Tennessee.

Examples of these stone rings are shown in Fig. 195. The larger ring is from an ancient mound settlement on an island in the Tennessee river, above Chattanooga.*

The original is as well finished and as graceful as a modern napkin ring, and looks surprisingly like one. The small ring was discovered by Prof. Putnam in a grave within the Lebanon works. Both are carved from dark steatite.

* We are indebted to the kindness of Mrs. E. T. Noel, of Nashville, for this fine specimen.

Two rings of the same material, and a large ring of black shale (Fig. 196), were found in the cemeteries near Nashville.*

The two beautiful rings of steatite look like burnished jet, and are as perfect in form as modern art could make them. It is indeed difficult to realize that they have been buried for centuries in the earth. Like some of the fine pipes of the same material, their long inhumation has not affected their polished surfaces.

One could scarcely be more surprised to see a gold bracelet lying in the debris of a stone grave than one of these bright symmetrical rings. They look like fine lapidary work, and seem entirely foreign to their surroundings in and about the graves, yet they are absolutely genuine antiques, types of the most advanced

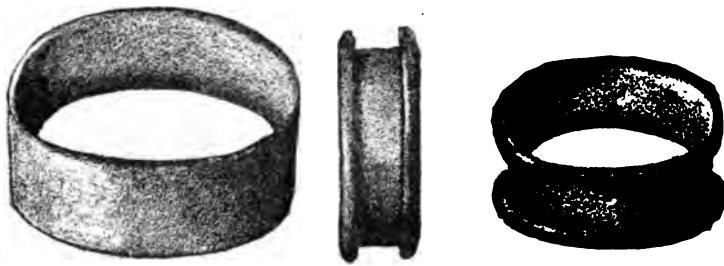


FIG. 196.—FINE STONE RINGS, FROM THE GRAVES IN THE VICINITY OF NASHVILLE.

art of the prehistoric race, buried centuries ago in these old cemeteries. They equal some of the best examples of old Mexican art. Their uses can not be determined with certainty. They were probably used as earring pendants suspended by cords, as two of them were found in the same grave. They doubtless belong to the same class of ornaments as the pottery and copper plated rings described in the chapter upon pottery. Copper wheels, somewhat analogous in form, have also been found in the graves, and will be illustrated in the next chapter. Large circular rings and discs were among the

* The steatite rings were found by Mr. John Blunkall in a stone grave a few miles west of Nashville. The large ring was found by Jas. Cox in a grave at Mound Bottom, about twenty miles west of Nashville. They are in the collections of R. A. Halley and the author.

familiar ornaments for the ears among the advanced races of both North and South America. They are to be seen upon the ancient tablets, pictographs, and idols.

The beautiful little wheel of compact limestone, nearly two inches in diameter, illustrated in Fig. 197, may also have been designed for an earring ornament, or pendant, to be hung by a cord around the central projection. Its proportions are remarkably accurate. It would not be possible to make a more exact wheel with the aid of a compass. Two of these rings were found in a

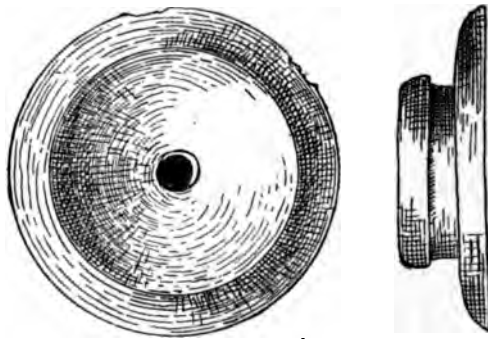


FIG. 197.—SYMMETRICAL STONE RING, SMITH COUNTY.

grave in Smith county, and were kindly sent to the writer for examination and representation by Messrs. Myer and Fergusson, of that county.

It seems the progressive villagers that once lived in the vicinity of Nashville must have had some knowledge of the use and convenience of tables, if we are to judge from the little specimen illustrated in Fig. 198.

The head of a skeleton rested upon this sandstone table when it was found by Mr. Frank Cheatham, in excavating a grave of the Noel Cemetery. The little table is about seven inches long, four and one-half inches wide, and two inches high. Its outlines are exact and well formed, as represented. It doubtless performed some

useful service in the lifetime of its owner, who was probably the occupant of the grave in which it was found. The most highly esteemed articles owned by these old Tennesseans must have been buried with them, as the rude sepulchers contain much more valu-

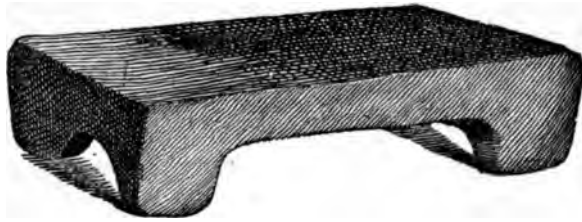


FIG. 198.—SANDSTONE TABLE, NOEL CEMETERY (ONE-FOURTH).*

able treasures than have been found outside of them, within the ancient settlements.

The cones or “mullers” form another interesting class of objects of polished stone or ore, quite common in Tennessee. They appear to be a specialty of this state, although found also in the adjacent states, and sometimes north of the Ohio river.

Several types are represented in Fig. 199.



FIG. 199.—CONE-SHAPED OBJECTS (ONE-THIRD).†

The illustrations, however, lack the rich metallic luster of the originals. They are usually made of hematite, but specimens of steatite and other stones are found.

These curious and symmetrical little conoids have generally been designated “mullers” or paint grinders, but, after carefully

* Cheatham collection.

† Author's collection.

observing the various types, we do not think they were intended for this purpose. They are too exact in form, and well finished, and most of them are too pointed for practical use as mullers. They also show no evidence of abrasion or grinding at the apices or points. The round top specimens are rare, and show no signs of rubbing. In a lot of a dozen specimens we have but one suitable for use as a paint muller. We have, however, no better theory to offer as to the purposes for which they were designed. We noticed a rather flat cone in General Wilder's collection, suggestively labeled "liver pad," a name probably as near the truth as "muller."

Akin perhaps to these conoidal forms, are the hematite rectangles or segments, very indifferently illustrated in Fig. 200.

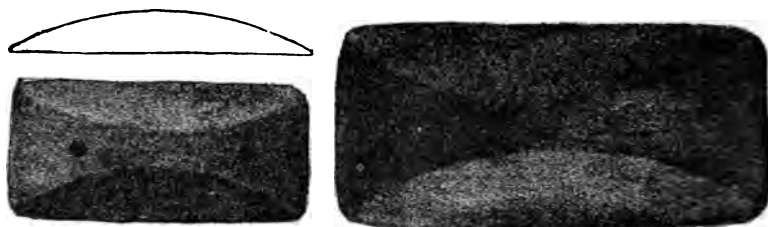


FIG. 200.—HEMATITE OBJECTS (TWO-FIFTHS).*

They are made of lustrous hematite, and are among the most beautiful of the specimens of polished ores. Some of them are pierced for hanging; others are without holes. Duplicates of the smaller specimens are found in the mounds of Ohio.†

The stone pendants, gorgets, and pierced tablets found in Tennessee, that appear to have been suspended by strings or worn upon necklaces as breast ornaments are very numerous. It would, in fact, be impracticable to illustrate all of the varied forms. Many of the types of the mound districts of Ohio and West Virginia are found here. They are usually made of slate, steatite, or

* Author's and Johnson's collections.

† Ancient Monuments, pages 206, 236, 237. Squier and Davis classed them with the perforated tablets.

jasper, but other stones were also used in making them. We shall not attempt to present the ordinary forms. Three types from the

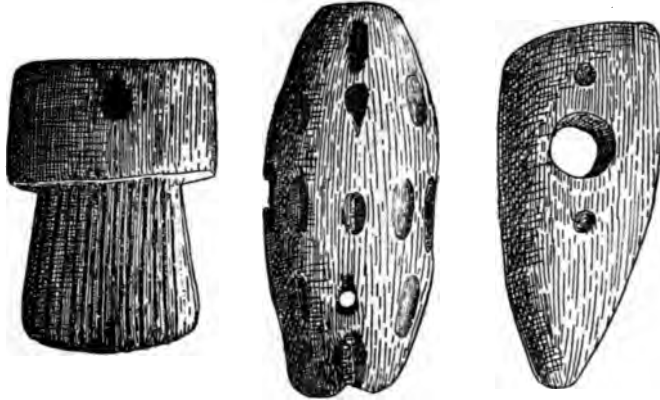


FIG. 201.—PENDANTS OR PIERCED TABLETS (TWO-THIRDS).*

vicinity of Nashville are shown in Fig. 201. All show evidence of

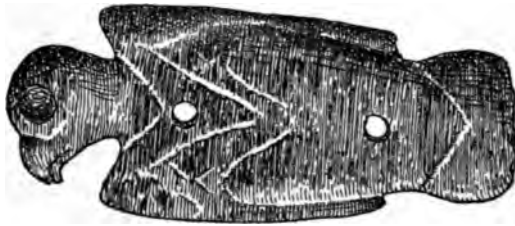


FIG. 202.—BIRD PENDANT (TWO-THIRDS).

having been used. The object on the right may have been a mechanical implement.

The beautiful pendant, carved from steatite in the form of a bird (Fig. 202), is from Smith county (Middle Tennessee), and belongs to the collection of Mr. W. E. Myer, of Carthage, who kindly loaned it for representation. It was probably a totem or emblem.

* Historical Society and author's collections.

Another fine specimen, of dark talcose slate, from Clay county, is shown in Fig. 203. It looks like a chisel or cutting implement, but the wide end is not sharp, and the ornamentation shows that it



FIG. 203.—STONE PENDANT (TWO-THIRDS).*

was not intended for practical use as a tool or implement. It is not unlike some of the pendants hanging from the necklaces upon fine engraved shells from the mounds, representing the human figure.

Other objects of stone found near Nashville are illustrated in Fig. 204. The larger specimen has been perforated at the ends, but it is not a tube, as the holes do not extend through it. Similar specimens are found in the Ohio valley. We can not suggest any use for the small double-pointed object shaped like a pick-ax.

Two peculiar objects from Middle and West Tennessee are represented in Fig. 205, one of gray slate, the other of compact Jasper stone. They appear to have been made for some special purposes, perhaps for some mechanical use. They may have been fishing or weaving implements.

* Johnson collection.

Among the finest specimens of polished stone found in Tennessee are the implements or objects usually classed as "ceremonials"



FIG. 204.—STONE "IMPLEMENTS" (TWO-FIFTHS).*

from their supposed use as symbols, parade weapons, or insignia of authority. The similarity of many of them to the ancient "ceremonials" of other sections of the mound area, show that the tribes

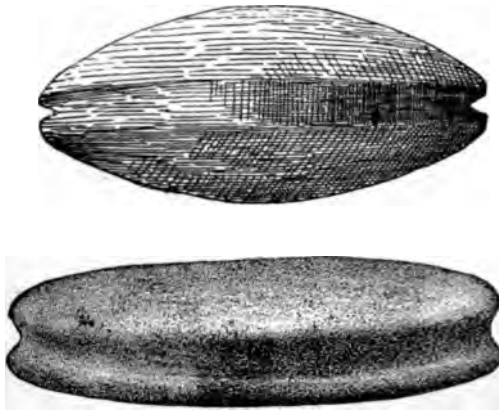


FIG. 205.—POLISHED STONE IMPLEMENTS (TWO-THIRDS).†

of Tennessee must have been connected in origin or customs with the inhabitants of widely separated districts. The comparison of

* Author's collection.

† Historical Society and J. G. Cisco collections.

local types, therefore, may assist in tracing the relations and migrations of the ancient tribes.

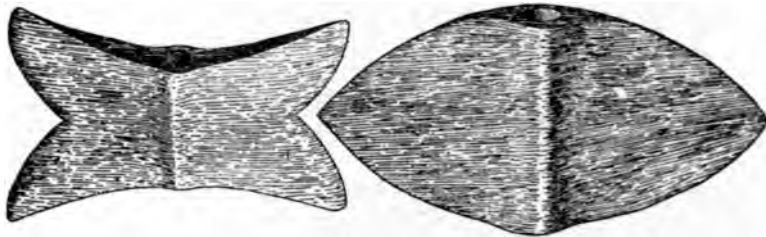


FIG. 206.—“BANNER STONES” ONE-THIRD).*

Two large and beautiful “ceremonials,” usually classed as “banner stones” or “butterfly stones,” are represented in Fig. 206.

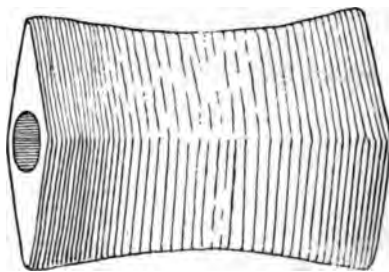


FIG. 207.—BANNER STONE OF QUARTZ (TWO-THIRDS).†

The leaf-shaped form of fine gray slate is from the stone grave district of Williamson county; the other, of dark red jasper, is from a mound settlement in Hickman county. Both are too fragile for any rough or even mechanical use. They were, doubtless, used as ornaments or symbols upon occasions of ceremony. The holes may have been drilled for wooden handles or staffs.

A handsome specimen of light-colored translucent quartz, found in Montgomery county, Tennessee, is illustrated in Fig. 207.

* Historical Society and author's collection.

† Johnson collection.

Another type, of dark yellowish jasper, found near the Noel cemetery, has been photo-engraved in Plate XV (author's collection).

The labor and skill expended upon these beautiful ceremonials indicate that they were highly prized by their owners, and must have been made for some special uses.

The two implements represented in Fig. 208 are also classed with the ceremonials.

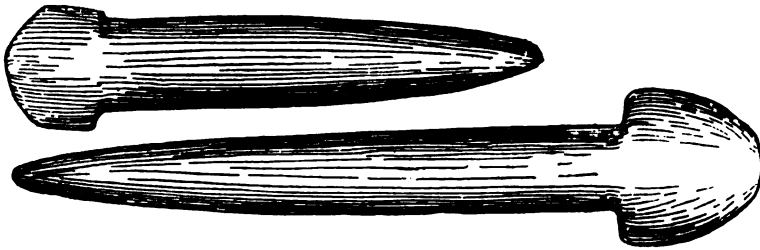


FIG. 208.—CEREMONIAL IMPLEMENTS (ONE-THIRD).*

As no other or more practical use has been suggested as to them, we call them ceremonial spades, or maces. They are made of dark shale or slate, and are respectively about eight and twelve inches in length. They are found in the stone grave settlement, a few miles south of Nashville, near Brentwood. The fine specimen of this form of polished greenstone, eleven inches long (illustrated in Plate XV (author's collection), has a larger and more delicate blade, ornamented with notches. It seems to be a unique type. We know of no duplicate.†

Captain Johnson has two of these ceremonials in his collections—one fifteen and three-fourths inches long, the other a delicate little type, five and one half inches in length—the largest and the

* Historical Society collection.

† For this fine "spade," we are indebted to our friend, H. H. Wilkerson, whose name upon the label is photo-engraved upon the plate. He found it on his farm north of Nashville, near the ancient cemetery on White creek.

shortest specimens we have yet seen. These implements are too dull for cutting purposes, and must have been too valuable for use as ordinary agricultural or mechanical tools.

The long, delicate, crescent-shaped "implement," of highly polished syenite, represented in Plate XV (author's collection), also probably belongs to the ceremonial class. It is eleven and one-half inches long. Originally it was probably twelve inches, as the point at one end has been broken. It was found by Theodore Haslem, in excavating a cellar in the ancient burial grounds of North Nashville.*

Captain Johnson has a perfect crescent, a little longer than the specimen photo-engraved, and another is illustrated in Pre-historic Remains of Kentucky (Plate VII). Strange to report, all of them are made of hard and beautifully colored syenite.

These symmetrical crescents are too fragile for any practical use as tools or implements. Their graceful forms suggest that they may have been used as symbols by the sun worshipping priests of the Stone Grave race. A crescent, carved in stone, two inches wide, and eight inches from point to point, was discovered some years ago in a tumulus near Oakland, California. It was supposed to indicate the prevalence of sun-worship. A large tumulus in the vicinity was of the typical Tennessee form.†

We have endeavored in the present chapter to describe and illustrate characteristic specimens of the better class of smooth or polished stone "implements" found in Tennessee. Most of them are from the central portions of the state. We regret that we have not had leisure and opportunity to make further investigations regarding the antiquities of the other sections of the state, and of the states adjacent, where ancient remains of much interest are to be found, but this has been impracticable.

* Mr. Haslem kindly presented it to the writer soon after its discovery.

† The large mound was circular in form, twenty-five feet high, and three hundred feet in diameter at its base.—Rev. D. S. Peet, in *American Antiquarian*, 1889, page 361.



PLATE XV.—Fine stone implements.
(one-half)

Many of the fine types illustrated, probably represent the highest stage of culture reached by the aboriginal tribes of America, north of Mexico, and they are, therefore, of special value to the student of archæology.*

*Since this chapter was written we learn from Mr. Gerard Fowke that two crescent-shaped objects of the form represented in Plate XV have been found in the mounds of the Scioto valley in Ohio.

CHAPTER IX.

COPPER, BONE, AND SHELL OBJECTS.

Native Copper—Figures of the Cross—Ear-rings and Ornaments—Copper Implements—Relics of De Soto—Implements and Objects of Bone—The Fine Spatulæ—Vessels of Shell—Shell Spoons—Shell Fork—Beads—The Shell Gorgets or Breast-plates—Gorgets Engraved with the Human Figures—The Douglass Gorget.

The antiquities of clay and stone, considered in the preceding chapters, are not more interesting than some of the objects and implements of shell, bone, and copper discovered in the rude sepulchers of the ancient cemeteries. Owing to the great distance separating Tennessee from the old copper mines along the southern borders of Lake Superior, articles manufactured from native copper are comparatively rare. The ancient tribes of Wisconsin were bountifully supplied with weapons and implements of copper, as might be expected from their proximity to these mines, and many fine specimens are to be seen in the archæological collections of that state. The mound builders of Ohio and Illinois were also much better provided with implements of native copper than their kindred in the Cumberland and Tennessee valleys. The copper ores found in the mines of East Tennessee were not malleable, and the natives were entirely ignorant of the difficult methods of smelting and utilizing them. We have in fact no positive knowledge that the mound builders of any section were able to smelt or mold the pure native copper of the north, or even the more easily manipulated galena or lead ore.

The modern Indians, or their immediate ancestors, must also have known of the ancient copper pits of Lake Superior, as the early explorers found both the northern and the southern tribes using articles manufactured of native copper obtained from that section. Verazzano, who visited the southern Atlantic coast, in

1524, reported to his patron, the French king, that he found the natives wearing ear-rings and other ornaments of copper,* and the Portugese's account of De Soto's expedition tells us that the Indians of the province of Cutifachiqui had copper axes, and used heated copper spindles to pierce holes in their ornamented shells.†

We have already mentioned the discovery in the stone graves



FIG 209.—COPPER ORNAMENT OR CROSS (TWO-THIRDS).

of a number of articles of copper. A few others may be added. In the aboriginal cemetery, on "Zollicoffer Hill," upon the banks of the Cumberland river, west of Nashville, Prof. F. W. Putnam found the rude copper ornament, or cross, illustrated in Fig. 209, and now in the Peabody Museum, at Cambridge. His report states that it was obtained in a stone grave of the usual form, "with the covering

* *Aboriginal Trade* (Rau), page 90.

† *History of Alabama* Vol. I, page 55.

stones in place," and with the remains of a skeleton of an adult. The copper object was found upon the breast of the skeleton. On one side of the grave were the fragments of a broken dish.

"The cross-like form of this ornament," Prof. Putnam states, "may give rise to the question of its derivation; and had any article of European make, such as glass beads, brass buttons, etc., common in Indian graves, subsequent to contact with the whites, been found in any one of the hundreds of graves I opened in Tennessee, I should consider the form of this ornament the result of contact with the early missionaries, but, from the total absence of articles denoting such contact, I think it must be placed in the same category with the 'tablet of the cross,' at Palenque, and be regarded as an ornament made in its present form, simply because it was an easy design to execute, and one of natural conception. The ornament is evidently made from a piece of native copper, hammered and cut into shape. The small perforation at the upper border still contains a fragment of the string by which the article was suspended, preserved by the action of the copper, and on one surface of the copper are slight evidences of its having been in contact with a finely woven fabric, thus showing that this ancient people, who were well advanced in the ceramic art, also possessed the knowledge of weaving." *

Other objects of copper and shell, upon which crosses are represented, have been discovered in the stone graves of Tennessee and will be considered hereafter.

In a stone grave in the same ancient cemetery, upon "Zollicoffer Hill," now included within the suburbs of "West Nashville," the writer, about twelve years ago, discovered a small carved wooden wheel, about two inches in diameter, and not over a fifth of an inch thick. It was covered upon one side with a thin circular plate of copper, much decayed from oxidation. The wooden wheel, and a small rod of wood attached to it, untouched by the copper, showed little evidence of decay. Although a small vessel

* Eleventh Annual Report Peabody Museum, page 307.

of pottery was found in an adjoining grave, we are of opinion that the stone grave in which the wooden wheel was found was of comparatively modern date. It seems impossible that delicate pieces of wood, without a covering of copper or some preserving material, should remain firm and undecayed through a series of centuries of burial.*

Dr. Joseph Jones discovered four small copper plates, or ornaments, stamped with rude cross-shaped figures, in a stone grave of the principal burial mound within the Big Harpeth Works. One of them is represented (two-thirds size) in Fig. 210, No. 1. They were found beside the cranium, and as they were pierced with holes

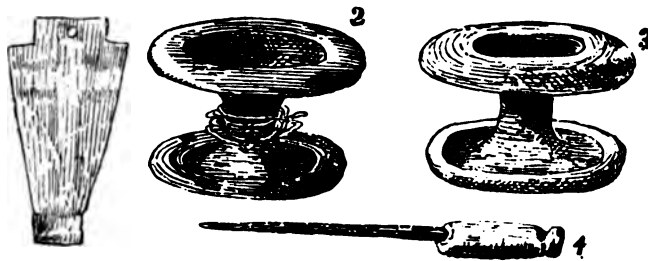


FIG. 210.—OBJECTS AND IMPLEMENTS OF COPPER.

for suspension, it is probable that they were worn as ear-ring pendants, or as ornaments upon a necklace.†

A spool-shaped copper object, very similar to the “ear-rings” of hammered copper, obtained by Prof. Putnam from the ancient mounds of Ohio, was found by Dr. W. M. Clark, of Nashville, in Williamson county, Tennessee, south of Nashville. It was about an inch and a half in diameter, the size of the typical Ohio specimens.

* Although Middle Tennessee has probably not been permanently occupied by Indian tribes for nearly two centuries, the Shawnees are reported to have lived during temporary intervals along the valley of the Cumberland at a later period. We have discovered many evidences of modern Indian occupation in the vicinity of Nashville, and it is quite probable that some of these Indians may have remained for a time in this section, and may have buried their dead upon Zollicoffer Hill within a comparatively recent period.

† *Aboriginal Remains* (Jones), page 59.

A small cord, or string, probably of vegetable fiber, was wrapped around it, as shown in the illustration (Fig. 210, No. 2). When discovered, it was deeply imbedded in a large mound, in a layer of ashes and burned clay, upon a level with the original surface of the ground.*

Similar wheels, or spool-shaped objects of copper, were also discovered in a mound within the Savannah works (Fig. 9). One of them is represented in Fig. 210, No. 3.† In general form, they are not unlike the rings or ear-ring pendants of pottery or stone (some of them plated with copper), illustrated in preceding chapters. The similarity of these ear pendants, or personal ornaments, from the mounds and graves of Ohio and Tennessee, offers additional evidence of the intercourse or relationship that existed among these mound building tribes during the prehistoric period. The little copper awl, with a horn handle (Fig. 210, No. 4), one-half actual size, was found upon Rhea's Island, Loudon county, Tennessee.‡ It must have been a most useful little implement for many purposes. It may have been one of the "copper spindles" with which, when heated, the natives pierced their shell ornaments, as stated by De Soto's journalists. A few well-made celts or hatchets of hammered copper have also been discovered in Tennessee. There is a fine specimen in the Wilder collection, and one from the Savannah mound group, illustrated in Rau's Smithsonian Collection (page 61).

In a mound about five miles east of Lebanon, Tennessee, Captain R. D. Smith, of the Athenæum at Columbia, discovered two thin copper plates, about eleven inches long, four inches wide, and about a tenth of an inch thick. The one we were able to examine appeared to have been made of hammered native copper, although it was quite uniform in thickness, and may have been made from a thin sheet of rolled or comparatively modern copper. They were each pierced with five holes, two at each end and one in the middle. Captain Smith called them "copper sandals." They may have been used

* Smithsonian Report, 1877, page 273.

† Smithsonian Report, 1870, page 408.

‡ Smithsonian Collection (Rau), page 61.

for this purpose, as they were conveniently shaped to fit the human foot, and were slightly curved in opposite directions. They were also considerably worn "at the toe."

The fragments or ornaments of copper, represented in Fig. 211, were discovered by Mr. D. G. Charles, of Florence, Alabama, a civil engineer of intelligence, who reports that they were obtained "in an isolated stone grave in a small mound twelve feet in diameter, situated one hundred and fifty feet from the west bank of Buffalo river, about a half mile from Ashland, Wayne county, Tennessee." There was a large artificial mound, of the typical Middle Tennessee form, about a half mile distant. In the same grave, Mr. Charles

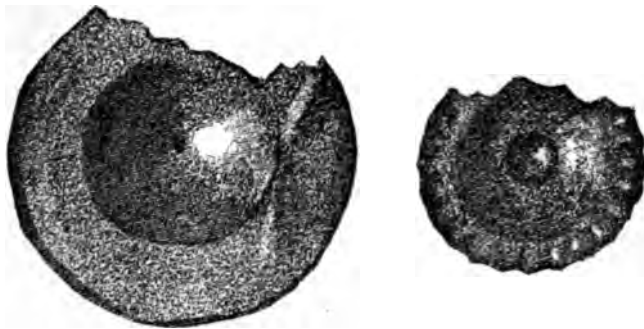


FIG. 211.—COPPER OBJECTS, PROBABLY RELICS OF DE SOTO (ACTUAL SIZE).*

found the very fine engraved shell gorget with the four bird heads, illustrated in this chapter (Fig. 231), a perfect vessel of well burned pottery, and a great number of large, finely-formed shell beads, all of which he kindly sent to the writer, with the statement that he had sent "the entire contents of the grave, minus the bones, which crumbled upon exposure." Very few graves have yielded treasures of such value.

The larger copper disc or ornament, about two inches in diameter, is roughly made, and is shaped somewhat like a low-crowned hat with a broad brim. Its appearance indicates that it was probably made from a thin sheet of rolled copper, but it may have been

* Author's collection.

hammered from the native ore. Fragments of a mold or center piece of wood, well preserved, were found inside of it.

The smaller copper object, about an inch in diameter, is not rudely made, like the other, but is evidently the outside plate of a button, or beaded ornament, of thin copper of uniform thickness. It is undoubtedly of comparatively modern manufacture, and was probably stamped by machinery, or made in a mold prepared for the purpose.

We have no reason to doubt the discovery of these objects of copper in the stone grave, as reported, with the other remains of shell and pottery. The latter are, beyond all controversy, genuine remains of the Stone Grave race and period. The engraved gorget of shell, as will be seen later, is a very beautiful specimen of a well known Tennessee and Mississippi type. It would be almost impossible to successfully counterfeit it.

There is but one satisfactory theory that can explain the presence of these articles of copper in the stone grave of the Wayne county mound. They are probably relics of De Soto's campaign. They look like harness trappings or ornaments of the old Spanish horseman.

Wayne county lies upon the Alabama and Mississippi border line, not far from De Soto's track across those states, and but a short distance from the point where the battle of Chicaca was fought. They are somewhat decayed with age and use, and are doubtless genuine antiques, but they are not pre-Columbian. We class them with the relics of De Soto discovered in a mound in North Mississippi by the agents of the Smithsonian Institution, and reported in "Work on Mound Exploration," by Dr. C. Thomas (page 9).*

BONE IMPLEMENTS.—Passing to a consideration of the implements and objects of bone discovered among the prehistoric remains in Tennessee, we find that these articles are not relatively so numerous, or so finely finished, as many of the antiques of stone,

* Described in Chapter II.

pottery, and shell. Bone implements of a rude character, coarse needles, sharpened points, and simple mechanical and domestic tools, such as necessity would suggest in a primitive state of society, are frequently found. A few articles have also been discovered that appear to represent a more advanced condition of the ancient industries. Doubtless many more objects of bone of great interest might have been found by careful and painstaking explorations among the stone graves, but in the majority of instances the graves have been excavated by unscientific and careless collectors and relic hunters,

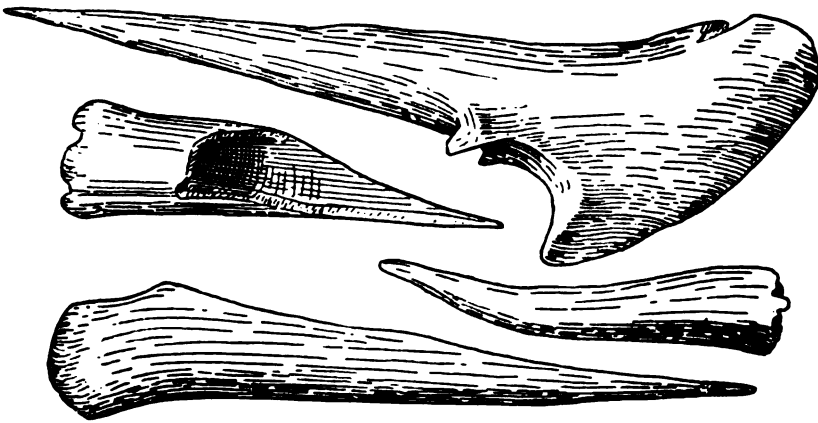


FIG. 212.—BONE IMPLEMENTS (TWO-FIFTHS).*

searching chiefly for vessels of pottery and curiosities of a more striking character.

Some of the bone implements of the ordinary class are shown in Fig. 212. They are from the graves in the immediate vicinity of Nashville.

In the grave of an adult in the large cemetery on Brown's creek, Mr. Otto Giers found the set of bone implements illustrated in Fig. 213. They were found lying together, partly under the shoulder or upper part of the skeleton. As they were not objects or ornaments that might have been deposited in the grave as a tribute

* Author's collection.

to the dead, it is possible that they belonged to the person buried there, and that they were the tools used and valued by him. In another grave Mr. Giers found a great number of very small bone implements, similar in form, and about three inches long. They looked like little toothpicks. The various needles or implements illustrated may have been used in making clothing of skins and cloth, in working untanned skins and feather work, in weaving and making nets, and in other industries.

The set of well made and finished little spatulæ or spade-shaped bone implements (Fig. 214) was discovered by Mr. John Blunkall,

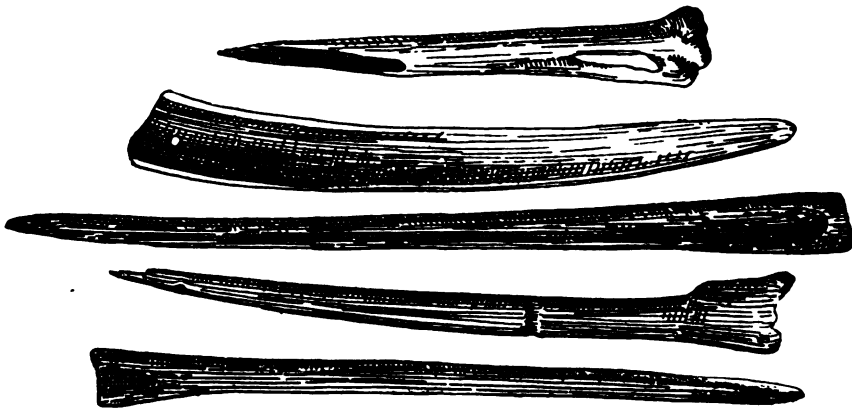


FIG. 213.—SET OF BONE IMPLEMENTS (TWO-FIFTHS).^{*}

one of our exploring "experts," in a stone grave on the Bass farm, near the Cumberland river, a few miles west of Nashville, in January, 1890. He also found many fine vessels of pottery and stone implements in the same burial grounds. Doubtless an important village or advanced settlement was located in that vicinity when the mound and fort builders were in power in Middle Tennessee. Mr. Blunkall discovered five of these "little spades" lying together, but one of them was unfortunately destroyed in digging, and he was able to secure only its handle and fragments of the blade. The four others are represented in the engraving.

^{*} Giers collection.

They were found in a grave about six feet in length, containing the skeleton of a full sized adult. The implements were laid apparently within the grasp of the hand. The largest is nine and one-fourth inches in length, and has a blade nearly an inch and a half wide. The smallest one is five and one-half inches in length.

These remarkable little implements, like some of the graceful vessels of pottery, seem to represent a somewhat advanced culture. Indeed, few of the objects discovered in the graves offer such evidence of a settled and sedentary state of society as the little set of "spades." The illustration scarcely does credit to them. The blades are all slightly curved or shovel-shaped, and they have been

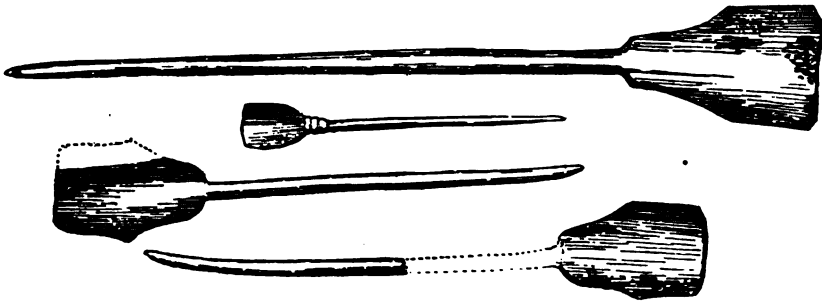


FIG. 214.—A SET OF BONE IMPLEMENTS.*

laboriously carved from large bones, and finished with nearly as much uniformity, care, and skill as a modern mechanic would bestow upon a set of implements of ivory or metal. They look as if they would be much more at home in an apothecary's shop than in an Indian wigwam. They surely can not be regarded as belonging to the equipment of a typical hunting or fishing Indian. They also seem too clean and delicate for use in mixing mineral paints. Perhaps they were designed as little spatulæ for mixing the salves and decoctions in the aboriginal shop of some old medicine man. Whatever was their use, they at least *appear* to represent some trade or occupation pertaining to a civilized or semi-civilized condition of society.

* Author's collection.

The articles of bone represented in Fig. 215 also have a somewhat more *respectable* appearance than ordinary "Indian relics." Views of the two sides of the largest object are presented, to show the ornamental carvings upon it. It is probably a portion of a handle or implement. It was found in the gravel bed of the island in the Cumberland river below the extensive burial grounds on the east bank opposite Nashville. It is evidently a piece of aboriginal work. The bone needle is from a stone grave. The little bird amulet or totem is not unlike the types of rude bird heads engraved upon some of the shell gorgets from the Nashville district. It was

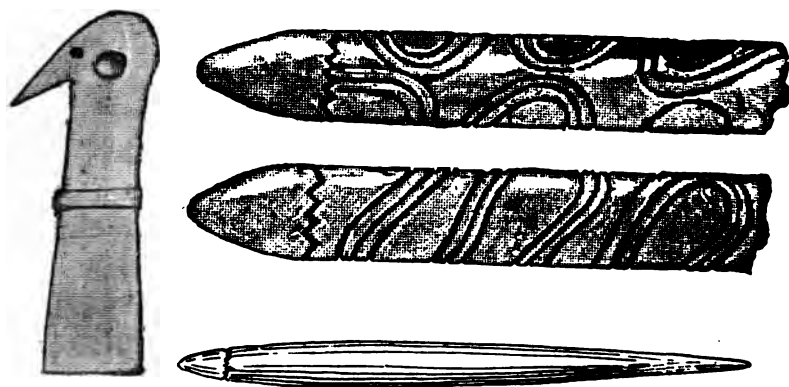


FIG. 215.—OBJECTS OF BONE (ACTUAL SIZE).*

found in a stone grave upon Judge Cooper's farm, containing also vessels of pottery and beads, by Mr. Buchanan and the writer.

Among the most numerous objects of bone deposited in the stone graves are the vertebræ of animals. Most of them have been ground or polished, probably by use as implements. We have two from the same grave that have been ground or cut into cubes with flat sides. They may possibly have been used in polishing pottery or stone implements. As heretofore stated, it seems singular that tool handles of bone and horn are not more frequently found. If commonly used, more of them should have been preserved. It may

* Giers and author's collections.

be that implement handles were usually made of wood, as we have suggested.

OBJECTS OF SHELL.—The objects of shell discovered in the ancient cemeteries of Tennessee are of special interest. Indeed, we doubt whether any of the antiques of pottery or stone equal in archæological value some of the remarkable engraved gorgets of shell from the ancient graves and mounds of Tennessee and the states adjacent. It seems there was an age of shell as well as an "age of stone" in ancient Tennessee. The rude sepulchers of stone, the faithful depositories of so many objects of aboriginal art and industry, have again interposed to save from destruction a vast store of materials of shell—implements, utensils, vessels, gorgets, beads, pendants, pins, ornaments, and other articles in great variety, illustrating the manner of life of the ancient inhabitants of Tennessee. The unburied objects of shell lost by the waste of time and exposure doubtless far outnumbered the remains found in the graves. The ancient villagers of the Cumberland and Tennessee valleys must have been industrious and thrifty travelers and traders to have been able to bring or import from the far Gulf or South Atlantic coasts, by purchase or exchange, the vast numbers of articles manufactured from marine shells.

According to the journals of the early discoverers, the natives of ancient Florida placed large shells from the sea upon the graves and burial mounds of the dead. Cabeza de Vaca tells us that sea shells and the "hearts" of shells were among the articles of merchandise sold by him and exchanged in his trading expeditions through the Gulf States. Adair, Bartram, and Haywood also mention the use of drinking cups of shell by the modern southern Indians. We are told by the old Spanish chronicles, that the great Aztec chief, Montezuma, used cups of "natural shells richly set with jewels." The far inland Indians of the pueblos of Arizona also used large shells from the sea as drinking vessels. We might, therefore, reasonably expect that these objects would be deposited in the graves of the ancient Indians with their other worldly treasures. They are found in the mounds and ancient cemeteries as far

from the seaboard as Iowa and Michigan, but nowhere, it seems, in such abundance and in such variety of forms as in Tennessee.

Mr. W. H. Holmes, of the Bureau of Ethnology, calls Tennessee a "great store-house" of ancient remains of shell. More than half of the fine engraved gorgets and a large proportion of the other objects illustrated in his very interesting and comprehensive article upon ancient shell remains, are from the valleys of the Tennessee and Cumberland rivers.

Of the marine shells, the *Busycon perversum*, or conch, is found in the greatest numbers. Thousands of them must have

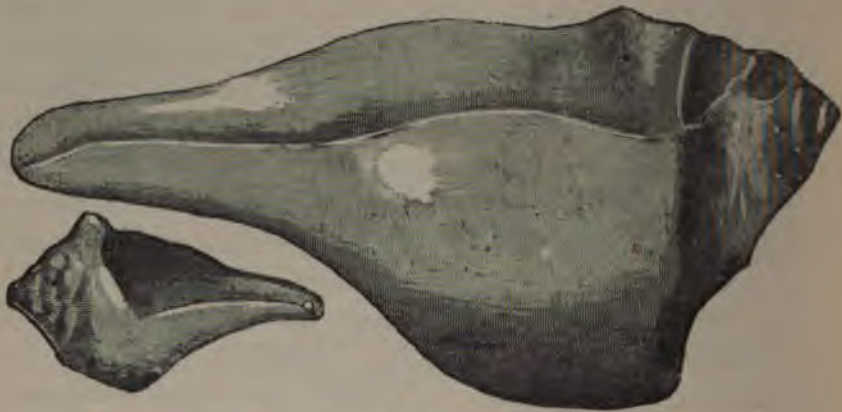


FIG. 216.—CONCH SHELL CUPS, NOEL CEMETERY (THREE-FIFTHS).*

been used in manufacturing the various utensils, ornaments, and implements discovered. The interior columns were utilized in making pins, beads, and other articles; the outside shells remaining formed useful and convenient vessels and cups. The *cassis*, the *strombus*, the *oliva*, and other univalves were also used. The main supplies, however, came from the more convenient *unios*, or mussel shells of the rivers. They were pounded into powder to temper the fine clays in the manufacture of pottery. They were utilized as spoons, forks, paint cups, knives, and mechanical and gardening tools. Thousands of them were cut into beads and ornaments.

† Author's collection.

Among the most familiar objects made from the conch shells, are the cups represented in Fig. 216. The little shell with the hole for suspension was probably a toy cup. The interior columns and partitions have been skillfully removed. These vessels are light and convenient, and are stronger than the bowls of pottery. The larger specimen illustrated is but seven inches long. We have others measuring ten inches, and still larger ones are found in the graves.

Many of the shell forms were reproduced in pottery. The vessels represented in Fig. 217 were evidently fashioned after conch shell models or suggested by them.*

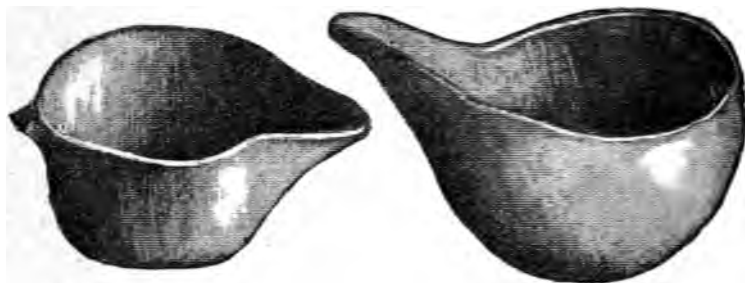


FIG. 217.—SHELL FORMS IN POTTERY, NOEL CEMETERY (ONE-THIRD).†

Since the illustrations in the chapter upon pottery were prepared, we have obtained from the Noel cemetery a beautiful vessel of pottery molded in imitation of a double shell, suggested, doubtless, by the valves of the unio (Fig. 218). It is a fine piece of ware, with thin walls and more graceful proportions than the engraving represents. Many dainty little cups in pottery were also fashioned in the shape of the unio.

The vessels of shell and pottery discovered in the graves were probably originally well supplied with food, placed there to be used upon the journey into the next world, as nearly all of them were

* A vessel of pottery from a burial mound in Arkansas, fashioned in almost exact imitation of the conch shell, is illustrated in the Second Annual Report of the Bureau of Ethnology, Plate XXII.

† Author's collection.

supplied with spoons. The food has disappeared by absorption and decay, but the spoons are generally preserved. They are found in

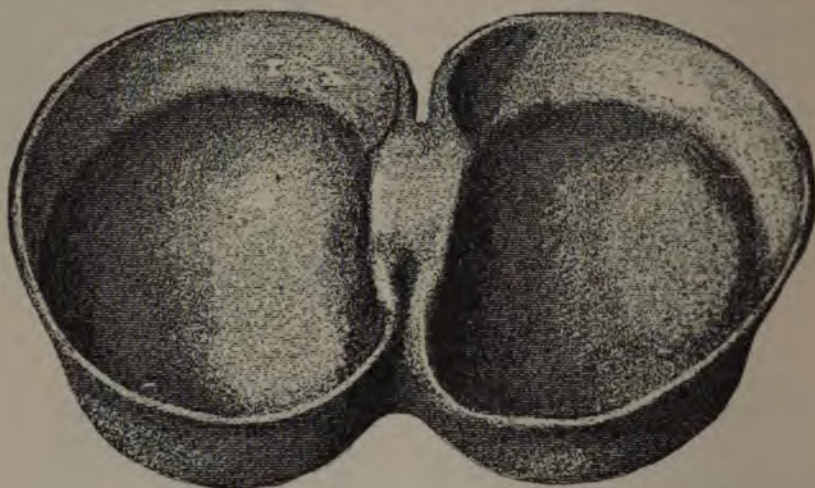


FIG. 218.—DOUBLE SHELL FORM IN POTTERY, NOEL CEMETERY.*

the vessels, and sometimes within the very bones of the hands. Good examples of the shell spoons may be seen in Fig. 219. The



FIG. 219.—TYPICAL SHELL SPOONS, NOEL CEMETERY (ONE-HALF).*

little spoon was obtained in the grave of a child. It will be observed, from the side of the bivalve selected, that the spoons were made for use in the *right hand*, showing that the mound builder, like his white successor, was "righthanded." In our explorations,

* Author's collection.

we have not observed a spoon made for use in the left hand; but we are informed by Mr. Holmes that there are two specimens of this form in the National Museum (from Tennessee and Kentucky).

A shell spoon of another type is illustrated in Fig. 220. It is a little over four inches long, and about two inches wide. Many varieties of these convenient little utensils are found. The ancient tribes of Tennessee were evidently more refined in their manner of eating than some of their more savage neighbors outside of the mound districts. Their shell spoons were of very proper and limited size. Beverly, in his History of Virginia, informs us that the



FIG. 220.—SHELL SPOON, NOEL CEMETERY (ONE-HALF).*

Indians of the Atlantic coast ate with large cockle-shell spoons. "The Spoons they do eat with," he states, "do generally hold half a Pint: and they laugh at the English for using small ones, which they must be forced to carry so often to their Mouths that *their Arms are in Danger of being tired before their Belly.*"†

The forms of the shell spoons from the graves were as good as models by the old pottery makers, as is shown by the one represented in Fig. 221.

The original vessel is a much better imitation of the spoon form than the engraving. The walls of this fine vessel are almost as thin as the shell after which it was modeled. It is as light and delicately formed as modern china ware and has doubtless performed useful service in its day. It is eight inches long and ten inches long.

* Author's collection.

† History of Virginia page 134.

Among the domestic conveniences of the Stone Grave race, knives and spoons seem to have abounded. There were doubtless some substitute for *forks*. Perhaps the pointed bone implements supplied their place, or, more likely, aboriginal *fingers*, in most cases, performed the duty now assigned to forks; yet we are not without evidence that these progressive villagers, in their march toward civilization (for they were evidently making good progress in that direction), had begun to realize the necessity for forks, and

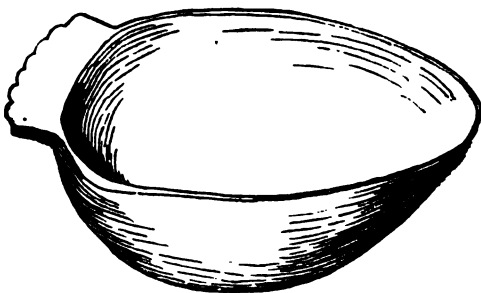


FIG. 221.—SPOON-SHAPED BOWL, POTTERY (ONE-FOURTH).*

had really invented an aboriginal fork of considerable promise (Fig. 222). This unique implement, carefully carved from the side of a conch shell, is a kind of combination spoon and fork. It was discovered in a stone grave by one of our men (George Wood), in exploring, under our direction, the ancient burial grounds on Judge W. F. Cooper's farm, on the bank of the Cumberland river, a few miles above Nashville. Its shape was evidently suggested by the form of the human hand, which had doubtless generally officiated as a fork, or in lieu of a fork, at the aboriginal repast. It is a little over three inches long, and about an inch and three-quarters wide. This little implement might have developed into a very convenient fork in a century or more of progress. The hole was doubtless intended for suspension on the neck or at the girdle of its owner. Forks, as part of the equipment of a dining-table, are a modern invention, but three or four centuries old. The Turks and Chinese have not yet learned to use them. They were unknown to the Romans

* Author's collection.

and Greeks, and to Mexican and Peruvian civilization. We may therefore regard this embryo fork, or spoon-fork, as a most interesting evidence of progress among the natives of the Cumberland valley. It is probably the only pre-Columbian fork discovered in America, and may antedate all other forks intended for individual or table use.

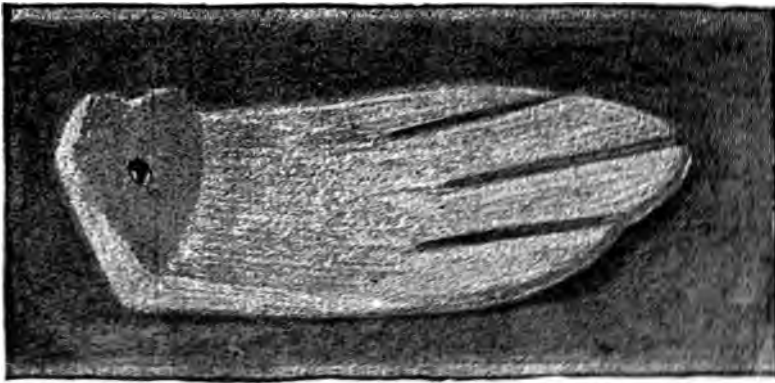


FIG. 222.—AN ABORIGINAL FORK OF SHELL "ACTUAL SIZE."

It is certainly older than any of the four-pronged forks of civilized society, as they are an invention of the nineteenth century.

Many curious pins of shell are also found in the graves. Some of the long, slender forms were probably used as ornaments for the hair; others were applied to mechanical uses. We have two "pins" from a grave in Jackson county, about three inches long, with heads shaped like common nails. The columellæ of the large conchs or busycons furnished most of the material for these pins and nail-shaped objects.

The little shell bracket (Fig. 222) was ingeniously carved from the heavy point and the perpendicular column of one of these shells.

The ingenuity of the mechanic and the taste that suggested this useful little object seem to indicate a somewhat advanced condition of society. Such articles would not usually be found in the temporary lodges of nomadic tribes. They belong to the homes of a sedentary and peaceful community.

* Author's collection.

Among the most familiar and interesting objects obtained from the stone graves of Tennessee are the beads and personal ornaments of shell. This would naturally be expected from the characteristics of the native races of America, whether savage or semi-civilized. All the modern tribes of Indians have adorned their persons and ap-



FIG. 223.—A BRACKET OF SHELL FROM A GRAVE (ACTUAL SIZE).*

parel with beads and ornaments. The Mexicans, the Peruvians, and the tribes of the pueblos were no exceptions to the general rule. Captain John Smith, writing of Powhattan, informs us that he was "richly hung with manie Chaynes of great Pearles about his necke," and that the young women about him wore "a great chaine of white Beades over their Shoulders." †

A large proportion of the beads of shell from the graves do not differ materially from the discoidal and tubular forms common among the modern tribes. Other types, however, are found, unknown or unobserved in later times. The greater portion of them have lost their gloss and finish, and some of them have crumbled

* Historical Society collection.

† True Relation of Virginia, pages 33, 34.

into fragments or dust, but we have secured many fine specimens apparently in as perfect a state as when first made. It would be a labor to count the number of beads on the different strings hanging in our collection.

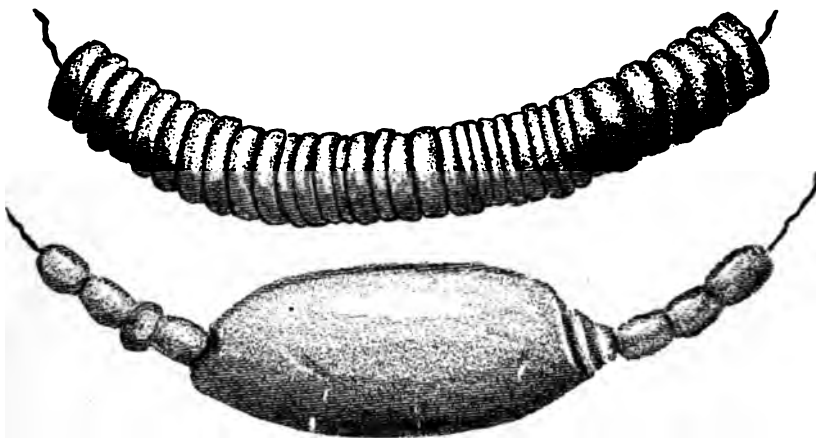


FIG. 224.—SHELL BEADS FROM THE GRAVES (ACTUAL SIZE).*

Some of the ordinary forms of disc-shaped beads of shell are shown in Fig. 224 (actual size).

The large shell, perforated for suspension, the *Oliva literata* of



FIG. 225.—LARGE DISCOIDAL BEADS, HICKMAN COUNTY.*

the Atlantic coast, is frequently found with other beads, and probably sometimes hung upon the strands of smaller beads, as represented.

About fifty of the fine large discoidal

* Author's collection.

found by Mr. Henry Nixon, of Centerville, in a single grave in Hickman county (Middle Tennessee). He kindly presented them to the writer. They are more than three-fourths of an inch in diameter. The holes are exact and carefully drilled, and the beads are symmetrical and well formed. The strings that held all these beads have long since decayed and disappeared, but many of them are found about the necks of the skeletons in the graves, as if they had been worn as necklaces. Some of them were probably worn as bracelets; others were doubtless placed with the dead as tributes. These discoidal beads were typical varieties used by the modern Indians of the southern coast, when first visited by the whites. The great numbers of them found suggest that many of them were probably used as wampum in ornamental belts or dress bands, or perhaps as shell money.

The historic tribes of both the North and South used certain varieties of shell beads as currency. Their value as ornaments probably first led to their being adopted as a convenient medium of exchange in bartering commodities. It seems scarcely possible that so many of them, of exactly the same size and form, would have been manufactured for merely ornamental purposes, yet thousands of the smaller classes were sometimes used by the modern Indians in a single belt of wampum. The belt delivered by the Sachems of the Leni Lenape to William Penn, in 1682, contained about three thousand. One of the historic belts of the Onandaguas contained nearly ten thousand. It can not be a matter of surprise, therefore, that so many beads are sometimes found in a single grave. It will be remembered that the female figure in the Sumner county pictograph, in the collection of the Historical Society (Plate II), appears to be holding a belt in her hand, probably a belt of wampum.

Adair informs us that shell beads had a fixed value as currency among the Cherokees and other tribes of southern Indians.*

* "Formerly, four deer-skins was the price of a large conch shell bead about the length and thickness of a man's forefinger, which they fixed to the crown of their head as an high ornament, so greatly they valued them."—History of the American Indians, page 170.

Beverly, in his *History of Virginia*, tells us that the Indians "had nothing which they reckoned riches, before the English went among them, except Peak, Roenoke, and such trifles, made out of the Cunk Shell. These passed with them instead of gold and silver, and served them both for money and ornaments. It was the English alone that taught them first to put a value on their Skins and Furs, and to make trade of them." (Page 95.)

Great numbers of beads of shell are found in the ancient graves of California that do not differ from the wampum or shell money used by the modern tribes of that section.*

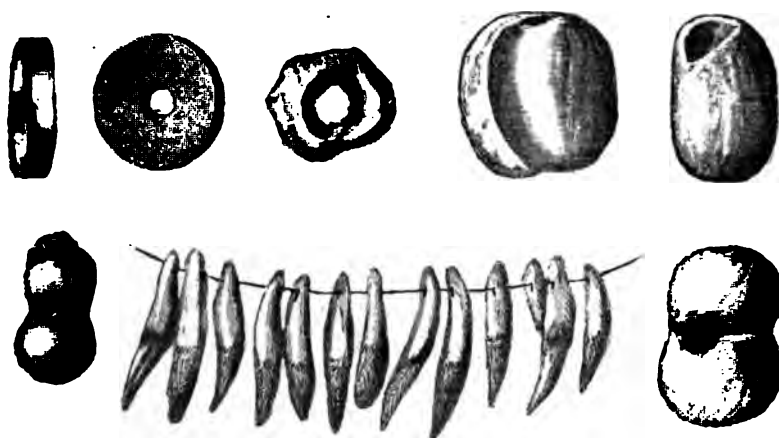


FIG. 226.—VARIOUS TYPES OF BEADS (TWO-THIRDS).†

Various forms of beads are represented in Fig. 226 (two-thirds actual size). All are of shell, excepting the little string made of the teeth of the wolf, or of some wild animal.‡

The illustration scarcely does justice to some of the beautiful specimens of shell beads in our collection. A few of them have not lost their original luster, and many of them are large and

* Shell beads were used as currency by the Indians of the Pacific Coast.—Lewis and Clark's Expedition, page 73.

† Author's collection.

‡ We are indebted to Mr. Zach. Patrick, of Rutherford county, for this rare string of ancient beads.

symmetrically formed. Hanging together in strings, they present a very different appearance from the pictures representing them.

We have not discovered any beads in the stone graves that we can with certainty identify as pearls, although many of them have the forms of pearls, and even in their somewhat decayed state show the glistening laminæ of pearly shells, but the laminæ are flat, and unlike the spherical formation of the pearl. De Soto's journalists, and other writers, reported that the natives possessed great numbers of pearls and necklaces of pearls. Perhaps the iridescent shell beads were mistaken by the soldiers of De Soto

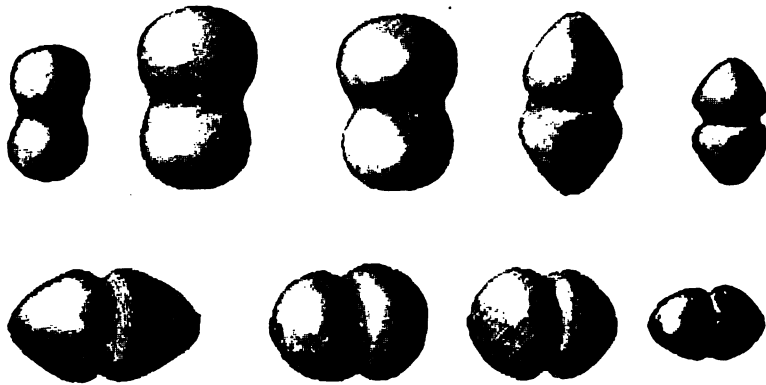


FIG. 227.—TERRA COTTA BEADS FROM THE GRAVES (TWO-THIRDS).*

for pearls. The shells seem more enduring than the delicate pearls, and probably most of the latter have dissolved into their original lime, and disappeared. Many fine pearls are found in the mussel shells of the southern rivers. They do not usually equal the oriental and Pacific coast pearls, but some of them are large and beautiful.

We have a hundred or more river pearls in our collection of gems—a few of them about a third of an inch in diameter. We are very familiar with their forms and appearance, yet, we repeat, we have not found them in the graves, either perfect or as beads, and

* Author's collection.

we think some of the pearls reported to have been discovered in the graves may have been only pearl-shaped beads of shell.

Many of the forms of shell beads were imitated in pottery, as may be seen in Fig. 227. Some of them are perforated; others are grooved in the middle for stringing. We describe them as "terra cotta beads," as they are made of the finest clay paste of a dark rich color, burned almost to the hardness of stone. They are very symmetrical in form

Fig. 228 represents some of the large beads or bead-shaped objects of stone from the graves. The specimen on the right is made of brilliant red jasper.

The most beautiful stone beads we have observed are the long,



FIG. 228.—LARGE BEADS OR BEAD-SHAPED OBJECTS OF STONE (THREE-FOURTHS).*

delicately-formed tubular beads of red and yellow jasper, found in Mississippi. The forms and material appear to be a specialty of that state. They are fine specimens of lapidary work, some of them being two or three inches long. The perforations in the hard jasper are as exact as if drilled by machinery.†

THE GORGETS.—We now pass to the consideration of another class of ornaments of shell—the gorgets. We doubt whether any of the ancient remains found within the mound area equal some of these antiques in archæological interest, unless we except the engraved plates of gorgets of copper from Georgia and Illinois, which are of somewhat similar character.

* Author's collection.

† Prof. R. B. Fulton, of the University of Mississippi, kindly sent us a number of fine specimens from his collection, for examination.

The vestiges of ancient art, by which we may hope to trace the state of civilization or semi-civilization reached by the mysterious race named for convenience "the mound builders," are often uncertain or contradictory. They have led to much discussion and widely diverging opinions. The evidences are very conflicting. Here and there, however, archæologists have been able to discover a few quite significant traces of a state of culture above the plane of ordinary aboriginal life in the Mississippi valley, as viewed from a historic or frontier stand-point. Some of the gorgets of shell from Tennessee and the states adjacent belong to this class of testimony. They tell a much more exact and intelligible story of the state of society in the prehistoric period in certain sections than can be discovered from the pipes and pottery, or even from the remarkable forms of the great earth-works.

The early discoverers inform us that gorgets of shell, ornamented with various devices, were worn as breast-plates by the natives of the Atlantic and Gulf coasts. Lawson, who visited North Carolina in 1700, states: "They (the Indians) oftentimes make of this shell (the conch) a sort of gorge, which they wear about their neck in a string, so it hangs on their collar, whereon is sometimes graven a cross, or some old sort of figure which comes next in their fancy." *

Beverly, writing of the Indians of Virginia, also states: "Of this shell they also make round tablets of about four inches in diameter, which they polish as smooth as the other, and sometimes they etch or grave thereon circles, stars, a half-moon, or any other figure suitable to their fancy." †

Gorgets or pendants of shell, stone, or metal are among the typical ornaments of the native races of America. They were worn by the tribes of California and of the pueblos. They appear in the Aztec pictures and upon the Maya tablets. They are suspended from necklaces, and are to be seen upon the breasts of the mytho-

* History of Carolina (Raleigh), 1850, page 315.

† History of Virginia (Loudon), 1705, page 58.

logical and historic figures. They will also be noticed upon the figures of the Sumner county pictograph. We might well expect, therefore, to find them in exploring the ancient graves of the Mississippi valley. Many of the types from the graves are not unlike the gorgets worn within the historic period.

Some of them are entirely plain; others are etched with various simple devices; but a few have been found that are among the finest specimens of aboriginal art in engraving, and afford information of unusual interest to the student of archæology.

Types of unengraved shell pendants or gorgets from the central portion of the state are shown in Fig. 229.

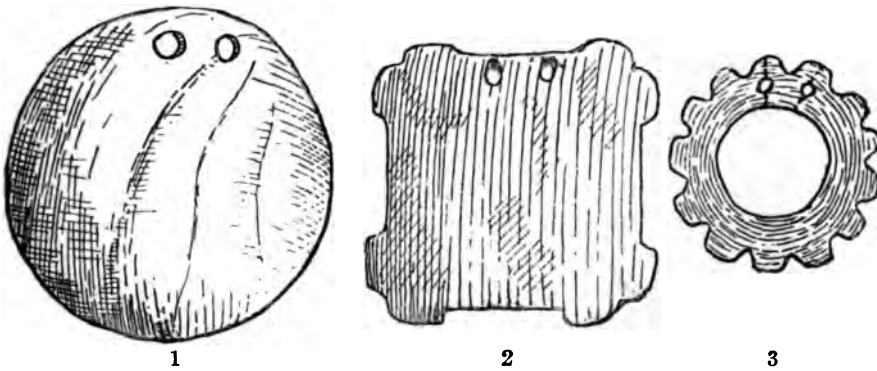


FIG. 229.—SHELL GORGETS OR BREAST ORNAMENTS, MIDDLE TENNESSEE.

No. 1, the plain, simple disk, is the most common type found in the graves and ancient settlements. We have a number of these specimens, ranging from the size of a discoidal bead to four inches in diameter.

Nos. 2 and 3 (Johnson collection) are unusual and beautiful types, recently found by H. L. Johnson in a rock grave under a cliff in Jackson county, Tennessee. There were about forty conch shell beads in the same grave. The unique little ring pendant or symbol is unfortunately slightly broken. In the rim there are thirteen segments of circles, the usual number of divisions or scallops in this class of gorgets, a characteristic evidently of some significance, as will be shown hereafter. The large square

unique. It must have been worn many years, and perhaps during more than one generation, as deep furrows have been worn by the strings in the hard shell above the original holes drilled for its suspension.

These unengraved pendants may have been mere ornaments, or they may have had some significance as symbols or amulets. Possibly, some of them were painted with totemic devices. We presume, however, the beautiful colors of the natural shells, and their varied forms, were their chief attractions.

The engraved gorgets are of much greater importance. It seems singular that the advanced tribes once occupying the central portion of the Mississippi valley, and whose remains show many evidences of a very interesting although limited culture, should have left no architectural monuments of stone, or inscriptions or writings in pottery or stone, on the plane of their highest development. Some of their shell and copper plates, however, and a few inscribed tablets, give us a glimpse of their better state, and confirm the other evidences of their culture. *They establish the fact that it actually existed and was of a very interesting character.*

The most familiar type of the engraved gorgets from the graves in the vicinity of Nashville are ornamented with circles or circular devices. One of the largest and most beautiful specimens of this type (Fig. 230) was found by Dr. Joseph Jones in the large mound on the bank of the Cumberland opposite Nashville.*

We quote Dr. Jones's description of this fine gorget and of its discovery: "In a carefully constructed stone sarcophagus, in which the face of the skeleton was looking toward the setting sun, a beautiful shell ornament was found resting upon the breast-bone of the skeleton. This shell ornament is four and four-tenths inches in diameter, and it is ornamented on its concave surface with a small circle in the center, and four concentric bands, differently figured, in relief. The first band is filled by a simple volute; the second is

* We are indebted to the courtesy of Prof. Langley, of the Smithsonian Institution, for this illustration from Dr. Jones's work, page 43.

plain; while the third is dotted and has nine small bosses carved at unequal distances upon it. The outer band is made up of fourteen small elliptical bosses, the outer edges of which give to the object a scalloped rim. This ornament, on its concave figured surface, has been covered with red paint, much of which was still visible. The convex smooth surface is highly polished and plain, with the exception of three concentric marks. This ornament, when found, lay upon the breast-bone with the concave surface uppermost, as if it had been worn in this position, suspended around the neck, as the two holes for the thong or string were in that portion of the border

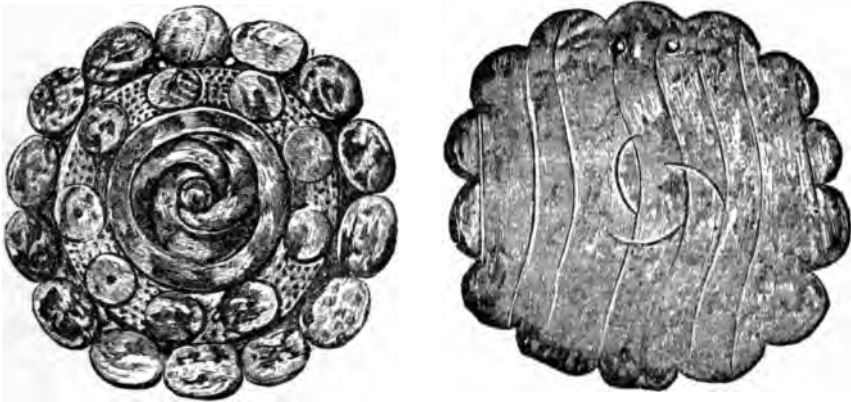


FIG. 230.—ENGRAVED SHELL GORGET, NASHVILLE TYPE (ONE-HALF).

which pointed directly to the chin or central portion of the lower jaw of the skeleton. The marks of the thong by which it was suspended are manifest upon both the anterior and posterior surfaces, and, in addition to this, the paint is worn off from the circular space bounded below by the two holes." *

Since Dr. Jones's discovery, many fine shell gorgets of the rosette or scalloped-disc design have been obtained from the stone graves in the vicinity of Nashville. Prof. Powell, of the Bureau of Ethnology, discovered one of the same size in a stone grave on the Bowling farm, west of Nashville, and there are several in the

* *Aboriginal Remains of Tennessee*, pages 42, 43.

Peabody Museum and in the collection of the Tennessee Historical Society.

We have obtained a number of good specimens of the same type from the burial ground upon the Noel farm, one of them fortunately as firm and durable as when it was made.

In the same cemetery we found a large shell disc of this pattern, with *two sets* of holes on opposite sides, above the center, arranged to hold it in place on the breast more conveniently and steadily.

The circles or sun symbols engraved upon these gorgets evidently had some special significance in the mythology, religion, or customs of the ancient people of the Cumberland valley. Upon no other theory can we explain their strict adherence to the details of these peculiar designs. If intended for mere ornamentation, the forms would have been varied to suit the fancy of the engraver, as were the forms and ornaments of the pipes. The circles on the rim nearly always number thirteen, and are of uniform size. Occasionally one is found like Fig. 230 with fourteen circles. The discs vary in diameter from three to four or more inches, but the designs are not materially changed. Their uniformity is very remarkable. Similar circles or sun symbols will be observed upon the skirts of the dresses of the two chiefs and on the banners in the Sumner county pictograph. Father Membre tells us they were painted upon the dresses of the natives of the Red River country when he visited them, in 1681. He also states that they worshiped the sun.*

The Natchez, and other tribes, were also sun-worshippers. It therefore seems probable that these symbols—the circles and stars upon the ancient discs of shell, and the crescent forms of some of the stone implements—were in some way connected with the religious rites of their predecessors. They may have marked the period of time or the numbers of sacred observances.

Another type of the shell gorgets found in Middle Tennessee, is illustrated in Fig. 231.

* Discovery of the Mississippi (Shea), pages 217, 228.

This beautiful specimen was obtained by Mr. D. G. Charles in a grave in the ancient burial mound on Buffalo creek, in Wayne county (Middle Tennessee), one of the southern counties of the state. The copper ornaments, or trappings, supposed to be relics of De Soto's campaign, were reported to have been found in the same grave. Whatever may have been the history of the relics of copper, there can be no doubt as to the antiquity or genuineness of this interesting shell disc, or of the other shell and pottery remains



FIG. 231.—SHELL GORGET, WAYNE COUNTY (ACTUAL SIZE).*

found with it. Its time-honored appearance, its still polished surface, and the spirited figures so skillfully engraved upon it, tell a story that no archæologist or collector can mistake. It belongs to a well known type, occasionally found in the vicinity of Nashville. One of the largest and finest gorgets upon which this design was engraved is from Mississippi, and is in the National Museum, at Washington. It is well illustrated in Mr. Holmes's work upon shell

* Author's collection.

remains. The engraving upon the Mississippi shell and Fig. 231 are almost identical. The latter, although smaller, is even more skillfully executed. Its genuineness may well be vindicated in the fact that we have had no little difficulty in finding an artist able to represent correctly the exactness and beauty of the original engraving.

Conceding that the marks of antiquity upon the shell might possibly be produced or imitated, no one but a master could counterfeit the skillfully engraved designs upon it.

Several gorgets of shell, with similar but generally more rudely executed figures, have been discovered in the vicinity of Nashville, and in the neighboring counties. The four bird heads with long sharp mandibles and tufted crowns, the four-sided figures with the straight regular lines, and endless scroll, and circle corners, *always appear upon the concave side of the disc*, showing that, whether rudely or elaborately executed, the *exact symbols are represented*, thus confirming their use as family or tribal insignia. We recently received a fine specimen with this design upon it, about three and one-fourth inches in diameter—now on the desk before us. It is discolored and incrustated with brown patina, a sure indication of great age, but the incised lines of its fine engraving are still visible. The latter is nearly a duplicate of the design illustrated. Its central figure has but eight points or angles, and the shell is not perforated in the center. It was found in a stone grave in Smith county, near Dixon Springs.*

The other specimens discovered have been described by Prof. Putnam and Mr. Holmes.

It is probable that the tribe or clan of the Stone Grave race that wore this ancient emblem or totem as a breastplate or ornament at one time occupied the territory extending from the Cumberland river, above Nashville, into the State of Mississippi, as all of these gorgets were discovered within these limits.

Birds were connected with many of the myths and poetic fan-

* Mr. W. W. Ferguson, of Smith county, kindly sent it for examination.

cies of the modern tribes. They were among the family totems of the Chickasaws, the Creeks, and the Cherokees.*

The eagle, the turkey, the crane, and the heron were totems. Perhaps the crested heron may have been the typical bird represented, or possibly the more humble woodpecker furnished the model. The four incised lines, and the endless ornamental scroll, were favorite designs of the old pottery makers, and will be observed upon the vessels illustrated in Fig. 50 and Plate VIII.



FIG. 232.—GORGET, WITH SYMBOL OF THE CROSS (THREE-FOURTHS).†

Mr. Holmes introduces an illustration of a quite similar four-sided scroll figure copied from an ancient Aztec picture. ‡

The central figure in the disc (Fig. 231), representing the sun, has twelve points, the same number engraved upon the fine Mississippi gorget—representing perhaps the twelve lunar periods.

The little cross in the center of the disc is a symbol frequently found, in some form, upon the engraved gorgets.

A better example of this symbol will be found upon the gorget illustrated in Fig. 232.

* Ancient Society (Morgan), pages 161, 163, 164.

† Buchanan collection.

‡ Second Annual Report Bureau of Ethnology, Plate LIX.

It was recently discovered by Mr. W. D. Buchanan, of Nashville, in a stone grave of the ancient cemetery on Judge W. F. Cooper's farm, a few miles east of Nashville, on the bank of the Cumberland river. The shell is discolored, incrustated, and mottled with age, but the figure of the cross is cut through it, as precisely, and with as sharp and straight edges, as if the work were executed by a skilled mechanic with metallic tools.

A large thin gorget of copper, with a marginal band and a symmetrical cross cut through its center, of the exact form of this cross of shell, was discovered in one of the Ohio mounds, and is now in the Museum of Natural History, at New York. Mr. Holmes gives a fine illustration of it. The two gorgets from these two mound sections, ornamented with designs so similar and peculiar, are very suggestive. There can be no question as to the antiquity of the Buchanan gorget. It is probably of purely aboriginal origin. We assisted in exploring the extensive burial grounds in which it was found. Nothing was discovered indicating contact with the whites, or early Europeans, unless this device of the cross can be considered as evidence of this fact.

Cross-shaped figures or ornaments have frequently been discovered among ancient remains in America. In considering this subject, Mr. Holmes offers the following interesting reflections: "The discoverers and early explorers of the New World were filled with surprise when they beheld their own sacred emblem, the cross, mingling with the pagan devices of the western barbarian. Writers have speculated in vain; the mystery yet remains unsolved. Attempts to connect the use of the cross by prehistoric Americans with its use in the East have signally failed, and we are compelled to look on its occurrence here as one of those strange coincidences so often found in the practices of people totally foreign to each other. If written history does not establish beyond a doubt that the cross had a place in our aboriginal symbolism, we have but to turn to the pages of the archæological record, where we find that it occupies a place in ancient American art so intimately interwoven with conceptions peculiar to the continent that it can not

be separated from them. It is found associated with other prehistoric remains throughout nearly the entire length and breadth of America." *

Another device engraved upon the shell gorgets found in the ancient graves and mounds of Tennessee is the serpent. The discs with this design appear to have been mainly used by the tribe or tribes that occupied the valleys of East Tennessee, as nearly all of them have been found in that section.

The serpent was an important figure or symbol in the mythology of the native races of America, and was associated with many of their religious rites. The most remarkable effigy mound constructed by the mound builders of Ohio was fashioned in its form. It was connected with the sacred ceremonies of the Mexican and Central Americans. The rattlesnake was a totem or symbol of the Moqui and Laguna Indians of the pueblos,† and was prominent in the religious ceremonies of the Zunis. The snake was also a totem of the Shawnees, and of a number of the northern tribes.‡ It is not surprising, therefore, that it was selected by one of the tribes of mound builders of Tennessee as the emblem to be engraved upon its breastplates of shell. Thirty or forty of these elaborately-carved gorgets have been discovered in the ancient mounds along the upper valleys of the Tennessee river—many of them four or five inches in diameter.

Fig. 233 represents a typical specimen obtained from the great mound at Sevierville, Tennessee.||

The serpent is engraved upon the concave side of the shell disc, cut from the *Busycon*. The holes for suspension will be observed. The head with the large eye, and widely-opened mouth, and the scaly coil are carved with considerable spirit. The tail and rattles are

* Second Annual Report Bureau of Ethnology, page 28.

† Ancient Society (Morgan), pages 179, 180.

‡ Ancient Society (Morgan), page 168.

|| The illustration is from Mr. Holmes's article in the Second Annual Report of the Bureau of Ethnology, Plate LXII. We are indebted to Major J. W. Powell for electrotypes of a number of the shell gorgets illustrated in this chapter.

behind the head. The uniformity of these peculiar designs, almost invariably engraved upon the concave surface of the shell, is remarkable. All of them have the same general form, although none of them are quite alike in details.

The central head, the coiled body with its complicated and obscure involutions, the scaly surface, and the marginal band, are constantly repeated in the general design. Sometimes the strange coiled figures can scarcely be recognized, yet, upon patient examination,



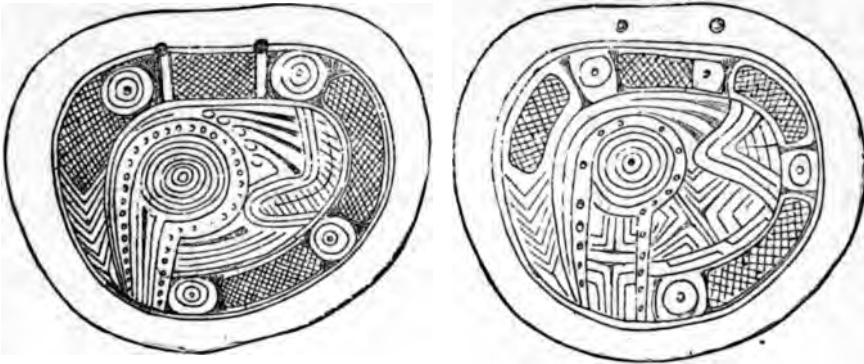
FIG. 233.—RATTLESNAKE GORGET, McMAHON MOUND, TENNESSEE (ACTUAL SIZE).

the mythological serpent is always found to be represented. The main features of this mysterious design must have been regarded as of great significance by the tribe or branch of the Indian family that wore these elaborate breastplates.

Outline engravings of two other familiar types of these mysterious designs (Figs. 234 and 235) are introduced to show their remarkable character. The long diameter of Fig. 234—nearly six inches,—will give a correct impression of the general dimensions of these large gorgets. The examples presented are not exceptional. Nearly all of them are equally well carved, and represent the same strange symbolism of the mythology or religion of the native races.

The central head and eye, the open mouth, the coiled body, tail, and rattles, will be observed upon close examination.

In the collection of the Tennessee Historical Society, at Nash-



FIGS. 234 AND 235.—RATTLESNAKE GORGETS, EAST TENNESSEE.

ville, there is a fine specimen, nearly six inches in diameter, of the type represented by Fig. 234. It is from one of the Harpeth cemeteries, south of Nashville.



FIG. 236.—ENGRAVED STONE DISC, CARTHAGE ALABAMA (ONE-SIXTH).*

In his work upon Art in Shell of the Ancient Americans, Mr. Holmes, of the Bureau of Ethnology, presents an illustration of a

* National Museum.

stone disc in the National Museum, from Carthage, Alabama, upon which remarkable serpent figures are engraved (Fig. 236).

Regarding this interesting stone, Mr. Holmes states: "I have seen in the National Museum a curious specimen of stone disk, which should be mentioned in this place, although there is not sufficient assurance of its genuineness to allow it undisputed claim to a place among antiquities. It is a perfectly circular, neatly dressed sandstone disk, twelve inches in diameter and one-half an inch in thickness. Upon one face, we see three marginal incised lines, while on the other there is a well engraved design, which represents two entwined, or rather knotted, rattlesnakes; within the circular space enclosed by the bodies of the serpents is a well drawn hand, in the palm of which is placed an open eye. This would probably have been omitted by the artist, had he fully appreciated the skeptical tendencies of the modern archæologist. The margin of the plate is divided into seventeen sections by small semi-circular indentations. This object is said to have been obtained from a mound near Carthage, Alabama."*

Mr. Holmes reports that "a similar specimen, from a mound near Lake Washington, Mississippi, is described by Mr. Anderson."†

We are inclined to regard this engraved disc as a genuine antique. The typical form of the stone; its discovery at Carthage, Alabama, the center of an advanced mound settlement; the coiled serpent figures; the angles or points behind the eyes, which occur upon the ancient stone and pottery figures from that section (see Figs. 62 and 84); the similarity of the open hand to the open hand figures upon the vessels of pottery from Tennessee and Alabama (Fig. 40)—all seem to offer testimony confirming the genuineness of this relic. More of these plates or discs have been discovered in Alabama than in any other section. The two vessels of pottery decorated with the figures of an open hand, in general appearance

* Second Annual Report Bureau of Ethnology, page 278.

† Cincinnati Quarterly Journal of Science, October, 1875.

not unlike the hand engraved upon the stone disc, have been reported or discovered *since* the publication of Mr. Holmes's article.

The art in the engraving is of a high character, but the latter is not more skillfully executed than the designs upon the highest type shell gorgets and the copper plates, illustrated in this chapter.

The beautiful shell gorget engraved with the figure of a spider (Fig. 237) was obtained from a mound on Fain's island, Tennessee. It is an unusual type. Specimens upon which this curious figure is



FIG. 237.—SHELL GORGET—THE SPIDER DESIGN, FAIN'S ISLAND, TENNESSEE (ACTUAL SIZE).

more naturally and elaborately represented have been discovered in the mounds at New Madrid, Missouri, and near East St. Louis, in Illinois.*

The symbol or figure of a cross is usually represented upon the back of the spider, and the carvings are most skillfully executed. The remarkable uniformity of design is also a characteristic of these "spider gorgets." It seems strange that they should be dis-

* The illustration is from the Second Annual Report of the Bureau of Ethnology, Plate LXI.

covered in mound districts so widely separated as East Tennessee, Western Illinois, and Missouri; yet we have already learned that both of these sections were once probably occupied by the tribes or kindred of the Stone Grave race of Tennessee. Further evidences of the similarity of the ancient arts in these distant sections will be presented hereafter.

We now come to the consideration of a series of ancient gorgets of shell, engraved with designs representing the human form. These antiques we regard as of very great archæological interest, as some of them probably mark the most advanced stages of art and development reached by the ancient inhabitants of America north of Mexico, and furnish information of a very definite and important character, as to the appearance, dress, and manners of the interesting race of mound builders, at the period when they were probably at the height of their power.

A number of these shell breast-plates, carved from the *Busycon*, representing the human face, have been discovered in the mounds of Tennessee, Virginia, and adjacent sections, but they are usually crude and of little value to the archæologist.

The figures engraved with the human form are also sometimes so peculiar and obscure that the devices upon them can scarcely be recognized, and are of interest chiefly as examples of mysterious symbolism.

Two of these specimens, from the ancient mounds of East Tennessee, are illustrated in outlines in Figs. 238 and 239.

The gorget from the McMahon mound, when discovered, was lying upon the breast of the skeleton.

The strange coils and folds, engraved in incised lines upon the serpent discs, are not more complicated and mysterious than these designs. A casual inspection reveals little but a confused mass of involutions, but, upon patient observation, the heads, the bodies, arms, hands, legs, and feet will be discovered. More elaborate illustrations of these engraved breastplates may be found in Mr. Holmes's monograph, but the figures are as obscure as in the outline sketches. The strange designs upon the three well-carved tab-

lets of stone found in Ohio—the Cincinnati, Wilmington, and Waverly tablets—probably belong to the same class of mysterious symbols or totemic designs.

A portion of the most remarkable engraved gorget of shell yet discovered in Tennessee is shown in Plate XVI. As the illustration is from Mr. Holmes's work, we quote his interesting description of it: "Among the multitude of works of art collected within the last decade, very few will be found to surpass in interest the fragment of a shell gorget from the McMahon mound, at Sevierville, Tennessee."

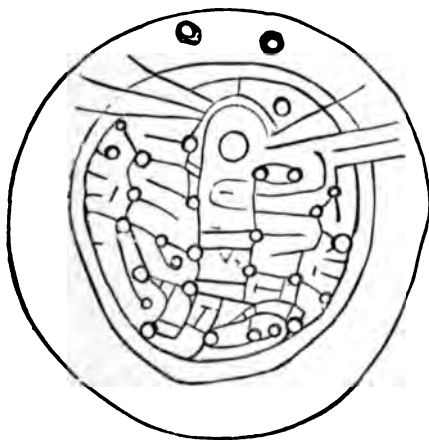


FIG. 238.—SHELL GORGET, MCMAHON'S MOUND, SEVIERVILLE (ONE-HALF).*

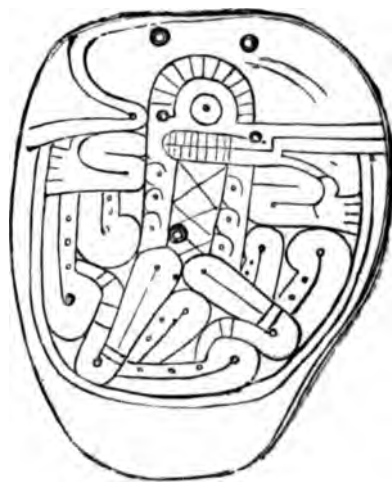


FIG. 239.—SHELL GORGET, LICK CREEK MOUND, MEIGS CO. (ONE-HALF).†

see. The disk, when entire, has been nearly five inches in diameter. A little more than one-third had crumbled away, and the remaining portion was only preserved by the most careful handling, and by immediate immersion in a thin solution of glue. This specimen is the first of the kind ever brought to light in this country, and must certainly be regarded as the highest example of aboriginal art ever found north of Mexico. The design, as in the other cases, has been

* National Museum.

† Peabody Museum.

engraved on the convex surface of a polished shell disk, and represents two human figures, plumed, and winged, and armed with eagles' talons, engaged in mortal combat. As in the last specimen described, this has, at first sight, an exotic look, bearing certainly, in its conception, a general resemblance to the marvelous bas-reliefs of Mexico and Central America; but the resemblance goes no further, and we are at liberty to consider it a *northern work sui generis*. The design has apparently covered the entire tablet, leaving no space for encircling lines. The two figures are in profile, and face each other in a fierce onset. Of the right-hand figure only the body, one arm, and one leg remain. The left-hand figure is almost complete; the outline of the face, one arm, and one foot being obliterated. The right hand is raised above the head in the act of brandishing a long double-pointed knife. At the same time, this doughty warrior seems to be receiving a blow in the face from the right hand of the other combatant, in which is clutched a savage-looking blade, with a curved point. The hands are vigorously drawn, the joints are correctly placed, and the thumb presses down upon the outside of the forefinger, in its natural effort to tighten and secure the grasp. Two bands encircle the wrists, and probably represent bracelets. The arms and shoulders are plain. The head is decorated with a single plume, which springs from a circular ornament placed over the ear; an angular figure extends forward from the base of this plume, and probably represents what is left of the head-dress proper; forward of this, on the very edge of the crumbling shell, is one-half of the lozenge-shaped eye, the dot intended to represent the pupil being almost obliterated. It is certainly a great misfortune that both faces are completely gone; their exact character must remain conjectural. A neat pendant ornament is suspended upon the well-formed breast, and a broad belt encircles the waist, beneath which, covering the abdomen, is a design that suggests the scales of a coat of mail. The legs are well defined and perfectly proportioned; the left knee is bent forward, and the foot is planted firmly on the ground, while the right is thrown gracefully back against the rim at the left. Double belts encircle the



PLATE XVI.—Shell gorget, the fighting figures, McMahon Mound.

knees and ankles. The legs terminate in wonderfully well-drawn eagle's feet, armed with vigorously-curved talons. A very interesting feature of the design is the highly conventionalized wing, which is attached to the shoulder behind, and fills the space beneath the uplifted arm. A broad, many-featured tail is spread out like a fan behind the legs. The right-hand figure, so far as seen, is an exact duplicate of the left. A design of undetermined significance occupies the space between the figures beneath the crossed arms; it may represent conventionalized drapery, but is more probably symbolic in its character. The heads have been probably a little too large for good proportion, but the details of the anatomy are excellent. The muscles of the shoulder, the breast and nipple, the waist, the buttock, and the calves of the legs, are in excellent drawing. The whole group is most graphically presented. A highly ideal design, it is made to fill a given space with a directness of execution and a unity of conception that is truly surprising."*

* "As to the two specimens from Sevierville, Tennessee (Fig. 238 and Plate XVI), the shadow of a doubt can not be attached to them. Were there no record whatever of the time or place of discovery, the evidence upon the faces of the relics themselves would show satisfactorily that they are genuine. They were taken from the great mound, which I have called the McMahon mound, at Sevierville, Tennessee. This mound was opened in 1881 by one of our most experienced collectors, Dr. E. Palmer. The specimens, when found, were in a very advanced stage of decay, pitted, discolored, and crumbling, and had to be handled with the utmost care to prevent total disintegration. They were dried by the collector, immersed in a weak solution of glue, and forwarded immediately to the National Museum at Washington. In this mound a multitude of relics were found, a large number being shell, many of which are figured and described in this paper. These two gorgets, as well as many others of more ordinary type, were found on or near the breasts of skeletons, and it is highly probable that they were suspended about the necks of the dead just as they had been worn by the living. By accurately ascertaining the authenticity of one of these specimens, we establish, so far as need be, the genuineness of all of the same class. If one is genuine, that is sufficient; the others may or may not be so, without seriously affecting the questions at issue; yet the occurrence of duplicate or closely related specimens in widely separated localities furnishes confirmatory evidence of no little importance." W. H. Holmes, in *Second Annual Report Bureau of Ethnology*, page 263.

The weapon brandished in the right hand, as has been suggested, very nearly resembles the large double-pointed chipped flint implements used by the Stone Grave race. Judging from the width of the hand holding it, it seems almost a duplicate of the large knife or spear in the writer's collection, illustrated in Plate XI. It is greatly to be regretted that the whole of this remarkable design was not preserved, as each of these rare discs representing the human



FIG. 240.—ENGRAVED SHELL OR GORGET, FROM ETOWAH MOUND, GEORGIA.*

form adds something to our knowledge of the appearance and manners of the interesting race that wore them.

Since the publication of Mr. Holmes's monograph, a few other gorgets representing the human form have been discovered in the ancient mounds. The specimen illustrated in Fig. 240 was recently discovered by Mr. Rogan, one of the assistants of the Bureau of Ethnology, in exploring the smallest of the three large mounds of the Etowah group, at Cartersville, Georgia.

* This illustration and the three illustrations following have been reproduced from the fifth annual report of Major Powell, of the Bureau of Ethnology.

It will be observed that it resembles the design of the fighting figures engraved upon the large gorget from Tennessee, in a few particulars. The necklace and pendant of the same fashion, the small square or circles ornamenting the dress, the semi-circles or wing ornaments at the side, are found upon both. A very similar pendant of stone is illustrated in Fig. 203.

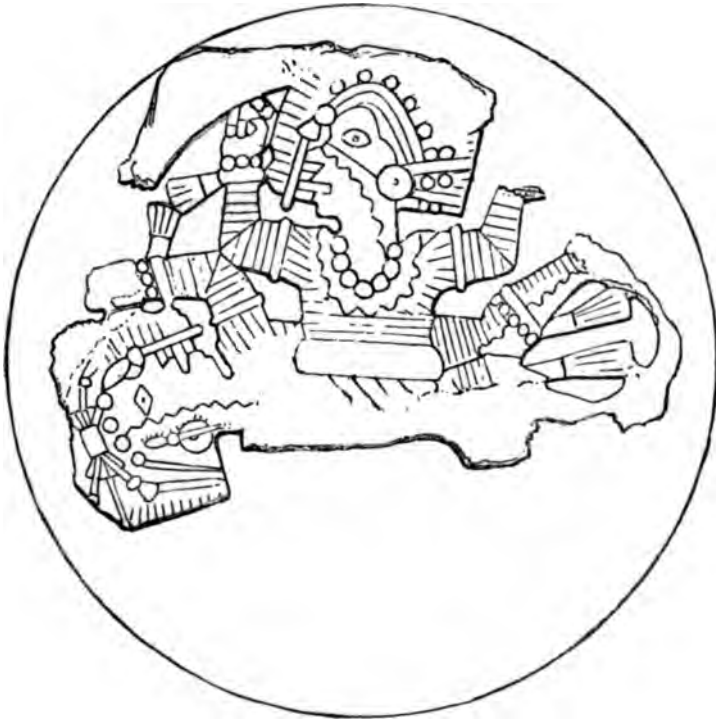


FIG. 241.—ENGRAVED GORGET, ETOWAH MOUND, GEORGIA.

In a stone grave of the typical Tennessee form, in the same Etowah mound, Mr. Rogan discovered the portion of an engraved shell gorget represented in Fig. 241.

Two figures appear in the design, one evidently representing a victory or triumph over a fallen foe. The typical necklace and wristlets of large beads will be observed. They are also to be seen upon the legs. The usual large discs or ear ornaments illustrated in the chapters upon pottery, stone, and copper also appear.

Like the other mounds of the Etowah group, the one explored by Mr. Rogan proved to be a rich treasury of antiquities. In its stone graves were also found a number of copper plates, stamped or marked with figures of a very remarkable character. Also, several unique and skillfully made copper ornaments for the head or crown.



FIG. 242. - COPPER PLATE, ETOWAH MOUND, GEORGIA.

Upon the two largest copper plates were mythological figures, in design unlike any vestiges of ancient art yet discovered in America. They are quite similar, differing only in subordinate details. One of them is illustrated in Fig. 242.

From Mr. Rogan's field notes in Prof. Cyrus Thomas's interest-

ing report of these discoveries,* we make the following extracts: "Grave A. A stone sepulcher, two and one-half feet wide, eight feet long, and two deep, formed by placing steatite slabs on edge at the sides and ends, and others across the top. The bottom consisted simply of earth hardened by fire. It contained the remains of a single skeleton, lying on its back, with head east. The frame was heavy, and about seven feet long. The head was resting on a thin copper plate, ornamented with stamped figures; but the skull was crushed and the plate injured by fallen slabs. Under the copper were the remains of a skin of some kind, and under this, coarse matting, probably of split cane. The skin and matting were both so rotten that they could be secured only in fragments. At the left of the feet were two clay vessels, one a water bottle and the other a very small vase. On the right of the feet were some mussel and sea shells; and immediately under the feet, two conch shells (*Busycon perversum*), partially filled with small shell beads. Around each ankle was a strand of similar beads. The bones and most of the shells were so far decomposed that they could not be saved.

"Grave B. A stone sepulcher, four and one-fourth long, two feet wide, and one and one-half feet deep, differing from "A" only in size, and the fact that the bottom was covered with stone slabs. The skeleton was extended on the back, head east. On the forehead was a thin plate of copper, the only article found.

"Grave C. A stone sepulcher, three and one-half feet long, one and one-half feet wide, and one and one-half deep; the bottom being formed by burnt earth. Although extending east and west, as shown in the figure, the bones had probably been interred without regard to order, and disconnected, the head being found in the north-east corner, with face to the wall, and the remaining portion of the skeleton in a promiscuous heap. There was no indication of disturbance after burial, as the coffin was intact. Between some of the bones was found a thin plate of copper, that had been formed

* Fifth Annual Report Bureau of Ethnology. page 95.

by uniting and riveting together small sections. Some of the bones found in this grave were saved."

There were ten graves in the mound, but these extracts will show the general character of the rest.

According to Mr. Rogan's measurements, this interesting burial mound was a truncated cone with a platform top. Its dimensions were as follows: "Average diameter at the base, one hundred and twenty feet; diameter of the level top, sixty feet; height above the original surface of the ground, sixteen feet."



FIG. 343.—COPPER PLATE, ILLINOIS MOUND.*

The copper plate illustrated was thirteen inches in length and nine inches wide. We observed these interesting shell gorgets, copper plates, and ornaments, in the National Museum at Washington, but were unable at the time to give them a critical examination.

The spirited figures upon the large plates at once suggest that the art represented is of Mexican or Central American origin; yet we do not find that they are duplicated in the ancient codices of Mexico, or upon the tablets of Central America. There are glimpses of typical Mexican art in the general designs, but the details are probably original artistic conceptions, that should be cred-

* National Museum.

ited to the advanced race that constructed the great mounds of Georgia and the Mississippi valley.

The necklace and pendant, the ear-rings, and the semi-circles upon the large wings, will at once be recognized as features of two of the fine shell gorgets.

The remarkable figure of an eagle engraved upon a thin copper plate (Fig. 243), obtained by Major J. W. Powell from an ancient mound near Peoria, Illinois, offers a good illustration of the extended wings, ornamented with the typical semi-circles or Indian characters, symbolizing the clouds, or wind. The latter are sometimes found upon the rude pictographs of the modern tribes. Another engraved copper plate of the same character was found in "an ordinary stone grave" in Jackson county, Illinois. Eagle claws also form the feet of the mythological figures engraved upon the large shell gorget from Tennessee.*

In the summer of 1889, we had the pleasure of examining the engraved shell gorget from New Madrid county, Missouri, illustrated in Plate XVII.

It is in the fine private collection of Mr. A. E. Douglass at the American Museum of Natural History in New York City. Mr. Douglass informs us that he obtained it from a reliable party in Missouri, who reported that "it was taken from a mound in New Madrid county, from the skull of a skeleton six or seven feet below the surface of the mound, in November, 1887." "Found with this object," he states, "and now in my cabinet, are about one hundred beads of shell, which are occasionally matted together, a sure proof of great antiquity, a human tooth, probably from the skull referred to, with a jasper pebble and other debris."

"Of its authenticity, I repeat, there can not be a doubt, though the original discoverer has apparently rubbed the interior surface to dislodge the tenacious brown patina characteristic of long

* Other objects of copper from the *Etowah* mound in Georgia and from Illinois, illustrating and confirming some of the specimens represented, are to be found in the Fifth Annual Report of the Bureau of Geology.

inhumation) and display the engraving, enough remains upon the incisions to prove that they are ancient, and the lines are full of it."

Mr. Douglass is an archæologist of high character, and has had many years of experience as a collector. We confirm all his statements as to the appearance of this gorget. It bears the marks of great age. It would seem impossible to successfully imitate the incrustations and discolorations upon it, or to invent or counterfeit the details of the remarkable design engraved upon it. The illustration was drawn from a photograph kindly presented by Mr. Douglass, but we have found it almost impossible to do full justice to the good art exhibited in the details of the engraving upon this shell disk.

Many features analogous to the figures already illustrated will be observed. The very peculiar pointed skirt or appendage hanging to the waist-belt, appears in both the copper-plate figures from the Etowah mound, which had not been published in 1887, when this shell gorget was discovered. The curious complicated head-dress and long hair tie also suggest the Georgia figures, as does the long implement or object under the right arm, which appears to be a duplicate of the object held in the right hand of the copper-plate figure. The fan-shaped scarf hanging from the waist appears in several of these designs. The ear-ring, the breast ornament, the large beads upon the wrists and legs, the half circles on the arms, the lips, all suggest analogies.

The grotesque proboscis-nose is, however, the unique and extraordinary feature of this design. It seems next to impossible that any other animal or object than an elephant or an ancient proboscidian should have suggested this remarkable nasal appendage. It calls to mind the grotesque masks in the Mexican manuscripts, imitating the faces and features of animals, but we have searched through Lord Kimborough's ponderous volumes illustrating these codices, without finding any mask exactly duplicating this proboscis.

Noses—long, turned up and down, pointed, curved, and twisted



PLATE XVII.—Engraved shell gorget, New Madrid, Mo.

are numerous, but none of them present a striking resemblance to the peculiar type represented in the Missouri gorget.

In No. 66, Codex Borgianus, Vol. III, there is a grotesque figure presenting a somewhat elephantine appearance (Fig. 244). It represents a masked priest in the act of sacrificing a human victim. Humboldt copies it in the "*Veus des Cordilleres*," with the following comment: "I should not have had this hideous scene engraved, were it not that the disguise of the sacrificing priest presents some remarkable and apparently not accidental resemblance to the Hindoo Ganesa, the elephant-headed god of wis-



FIG. 244.—GROTESQUE PICTURE FROM ANCIENT MEXICAN MANUSCRIPT.

dom. The Mexicans used masks imitating the shape of the heads of the serpent, the crocodile, or the jaguar.

"One seems to recognize in the sacrificer's mask, the trunk of an elephant, or some pachyderm resembling it in the shape of the head, but with an upper jaw furnished with incisive teeth. The snout of the tapir no doubt protrudes a little more than that of our pigs, but it is a long way from the tapir's snout to the trunk figured in the Codex Borgianus. Had the people of Aztlan derived from Asia some vague notion of the elephant, or, as seems to me, much less probable, did their traditions reach back to the time when America was still inhabited by these gigantic animals,

whose petrified skeletons are found buried in the marly ground on the very ridge of the Mexican Cordilleras?"*

Many important scientific discoveries have been made connecting human life with an early period in the geologic history of our western continent since Humboldt published his works, and the theory that primitive man was a contemporary of the mammoth in America is now accepted by a majority of the scientists who have given special attention to this subject.

Father Charlevoix, whose *History of New France* was published in 1744, records a North American legend of a great elk: "There is current also among these barbarians a pleasant enough tradition of a great Elk, beside whom others seem like ants. He has, they say, legs so high that eight feet of snow do not embarrass him; his skin is proof against all sorts of weapons, and he has a sort of arm which comes out of his shoulder, and which he uses as we do ours."†

The latter expression is very remarkable. It seems difficult to account for such a tradition, excepting upon the hypothesis that it originally sprung from the sight of a live proboscidian.

In the valuable collection of the Academy of Natural Sciences, of Davenport, Iowa, there are two stone pipes carved in the form of an elephant, or some closely allied quadruped. The representations are unmistakable. They were evidently the work of some person or persons acquainted with the general form of the gigantic animals whose remains are frequently discovered in the ancient peat and marl beds in many sections of North America.‡

There is an ancient effigy mound in Wisconsin with outlines shaped somewhat in the general form of a mastodon or elephant.||

* *Veus des Cordilleres*, Plate XV; *Researches into the Early History of Mankind* (Dr. E. B. Tylor), page 313. The illustration (Fig. 244) has been reproduced from Dr. Tylor's valuable work.

† Charlevoix, Vol. V, page 187. Quoted by Dr. Tylor.

‡ The authenticity of these pipes has been questioned; but we have carefully examined the facts relating to the discoveries, and we find no good reason to doubt their genuineness.

|| Concerning the peat beds of Michigan, Prof. Winchell states that: "These

Another unique shell gorget has been discovered in a mound in South-eastern Missouri, which we regard as of sufficient importance to present in this connection to enable our readers to have the benefit of the *series* of engraved gorgets for comparison.* It is illustrated in outlines in Fig. 245.†

The disc is about four and one-half inches in diameter. The small outline sketch scarcely does justice to the details of the original engraving. The design differs materially from the figures upon the other gorgets and the copper plates. There are some similar features, however, which seem to verify the genuineness of them all, yet all contain original and different characteristics, which are alike useful in establishing the authenticity of these interesting antiques. The pointed skirt or apron, with the rectangular ornament, appears upon the Georgia plates and the Douglass disc. The fan-shaped scarf, falling beside the feet, appears in some form upon nearly all of them. The circular ear-ring is always present. The single tattoo mark across the face brings to mind the similar strong lines across the face of the large marble head illustrated in Chapter IV (Fig. 51).

They also appear upon the faces represented upon some of the stone pipes of the mound builders. Regarding this fine gorget, Mr.

beds are the sites of ancient lakelets, slowly filled up by the accumulation of sediment. They enclose numerous remains of the mastodon and mammoth. They are sometimes found so near the surface that one could believe they have been buried *within five hundred or a thousand years.*"—*Post Tertiary Phenomenon of Michigan: Recent Origin of Man*, page 331; *Annual of Scientific Discovery*, 1871, page 239.

In confirmation of these views, Dr. C. C. Abbott also remarks: "It is unquestionable that many of the remains of the mastodon found in New Jersey and New York are far more recent than some of the relics of man, and *it is simply impossible that even so late a comer as the Indian should not have seen living mastodons on the Atlantic seaboard of this continent.*"—*Popular Science Monthly*, July, 1885, page 310.

* It is in the possession of Prof. W. B. Potter, of St. Louis. An illustration and description of it appeared in Mr. Conant's *Footprints of Vanished Races*, and subsequently in Mr. Holmes's monograph upon *Art in Shell*.

† We are indebted to Major Powell for electrotypes of the two illustrations presented in Figs. 245 and 246. There is also an illustration of this gorget, *natural size*, in Mr. Holmes's paper.

Holmes remarks: "Any one familiar with the curious pictographic manuscripts of the ancient Mexicans will see at a glance that we have here a sacrificial scene, in which a priest seems to be engaged in the sacrifice of a human being. In the extraordinary manuscripts of Aztecs, we have many parallels to this design. So closely does it approach the Aztec type that, although no duplicate can be found in any of the codices, there is not a single idea, a single member, or ornament, that has not its analogue in the Mexican manuscripts. Fortunately for the credit of this Missouri relic, we do not find its duplicate; there are only family resemblances; there are



FIG. 245.—SMALL GORGET—THE HUMAN FIGURE, MISSOURI MOUND.

similar plumes, with similar ornaments and pendants; similar costumes and attitudes; there are similar features and similar symbols, but there is no absolute identity except in motive and conception." Mr. Holmes presents an example from a Mexican manuscript for comparison (Fig. 246),* which we also introduced to show our readers the marks of identity and of contrast in the two designs.

We have devoted more time and space to the consideration of these engraved gorgets of shell, and the copper plates, than we had contemplated, as they have constantly presented new features of interest. Whether we study the simpler forms of the scalloped discs,

* Fijervary collection, Budapest, Hungary. Kingsborough, Vol. III, Plate 22.

the symmetrical squares and circles, the complex serpent symbols, the spider emblem, or the strange mythological figures in the human form, the designs all appear to have some serious significance, intimately associated with the social and religious life of the advanced race of mound builders. The artistic features of the engravings command respect. They are the product of serious art, both in conception and treatment. Indeed, they are the highest types of the prehistoric art of the north. A few of them are as vigorous in design and execution as the art in the picture writings of Mexico, or upon the tablets of Central America: yet, notwith-



FIG. 246.—FIGURE FROM AN AZTEC PAINTING.

standing the occasional suggestions of a Mexican or southern origin, they are evidently, in the main, of original and independent growth.

Placing them beside the best known pictographs of the historic tribes of the Mississippi valley, we are compelled to admit that they represent a higher state of society and a better culture than the latter. They doubtless mark the highest stage of development reached by the Indian race of the north-east, a race evidently akin to the progressive Indian villagers of the west and south-west, who, under more favorable surroundings, were able to build up a better civilization in the valley of Anahuac.

Commenting upon the Missouri gorget (Fig. 245), Mr. Holmes remarks: "The engravings of the mound builders represent legendary creatures, derived from the myths of the fathers, and in this respect have their parallels in the bird-man of the Haidahs, the war god of the Zunis, and the mythical deities of other countries, but they are never illustrative of the customs and ceremonies of the people themselves. As an ornament, this Missouri gorget is a member of a great family that is peculiarly northern, but the design engraved upon it affiliates with the art of Mexico; and so close and striking are the resemblances that accident can not account for them, and we are forced to the conclusion that it must be the offspring of the same beliefs and customs, and the same culture, as the art of Mexico."

CHAPTER X.

CONCLUSION.

The Genuineness of the Specimens Illustrated—The Superior Types from the Mounds and Stone Graves—The Evidences of a Western or South-western Origin—The Crania—The Tumuli of Mexico and the South—The Analogies in Art and Industry—The State of Ancient Society—The Northern and Southern Indians.

In the series of historical and ethnological studies presented in the preceding pages, we have endeavored to illustrate and describe specimens of the various classes of antiquities discovered in Tennessee and in some of the adjacent states. We have desired, as far practicable, to present exact and positive information, in facts and illustrations relating to the ancient monuments and the remains of art and industry in this general section, as *a contribution to the fund of archæological knowledge, that might aid in determining the state of aboriginal society in the prehistoric period represented by them.*

We have endeavored to conduct our investigations in a spirit of inquiry rather than of advocacy, and we therefore have not hesitated to express opinions independently of theories, and sometimes apparently at variance with our general views upon this subject. In presenting the illustrated chapters, we confess that we have been writing with an increasing respect for the culture represented by some of the objects discovered.

It will be observed also that we have tried to conform to the rule laid down by Aristotle, that "no archæologist should be believed, unless he preserves the evidences of his assertions." We have, therefore, devoted more attention to the illustration of specimens than to theories regarding them.

As to the genuineness of the new and original specimens pre-

sented in the preceding chapters, we desire to state that *no shadow of suspicion should fall upon any one of them*. A large proportion of them are from our own private collection, and all of them have come from proper custody, and have been carefully examined. Regular dealers in antiquities are as yet unknown in Tennessee. There are but few "collectors," and "archæological frauds" have rarely found their way into this general section. There has been no commercial market for them, and until recently but little demand for *genuine* specimens at a money value. There has, therefore, been no advantage to be gained by counterfeiting relics, and the frauds practiced at the North and East are unknown here. As a collector, observer, and student of many years' experience, the writer feels justified in guaranteeing the authenticity of the entire list of new specimens illustrated. This statement is, of course, mainly based upon the information presented in the text, regarding each one of them.

It is not our purpose to enter upon an extended consideration of the interesting ethnical and archæological problems naturally suggested in reviewing these discoveries, as we have already exceeded the limits, both of time and space, allotted to this work, but a few points of interest will be briefly noted.

Any antiquarian or collector familiar with this subject, will be impressed with the fact that it would be impossible to gather a collection of antiquities of such varied and advanced types as have been illustrated, within the limits of the United States, outside of the territory occupied by the mound building tribes. They present unmistakable evidences of a state of society above the social condition of the prehistoric tribes of Canada and the North-eastern States, including New York and Pennsylvania—Virginia also.

In Dr. C. C. Abbott's valuable work upon the *Primitive Industries* of the native races of the north Atlantic seaboard, which illustrates the best archæological specimens of that general section, a very different and inferior class of objects are presented. They are much ruder, and of more primitive types. This well-recognized fact seems to separate the culture of the mound builders from that of the

ancient tribes of the North-east, the Iroquois, the Hurons, and the Indians of the Algonkin stock, by well-defined lines of distinction, indicating that the tribes of the North were more nomadic and lived in a more barbarous state.

Unmistakable evidences are also presented in the preceding pages of contact, intercourse, or relationship, more or less intimate, between the aborigines of the Mississippi valley, and the ancient peoples of the South-west and the of pueblo districts. The similarity in the forms of the crania found in the ancient graves within the mound area, and the crania of the ancient inhabitants of Mexico, Central America, Peru, and the pueblos, suggests a common origin. The broad-headed or brachycephalic type is predominant. It appears to distinguish the cranial types of the old peoples of the South and South-west from the long or oval crania of the northern tribes. The short, broad skulls seem also to have represented the ethnic tendencies toward progress and development that characterized the ancient Mexicans and the Indians of the village or semi-village class.*

* Bearing upon this point of different peoples, we find that the prevailing form of the skulls from the older burial places across the northern portions of the continent, from the Pacific to the Atlantic, is of the long, narrow type (dolichocephalic), while the skulls of the old peoples of Central America, Mexico, and the south-western and southern portions of the United States, are principally of the short, broad type (brachycephalic). Following the distribution of the long and short skulls, as they are now found in burial places, it is evident that the two forms have spread in certain directions over North America: the short or broad-headed race of the South spreading out toward the East and North-east, while the long or narrow-headed race of the North has sent its branches southward, down both coasts and toward the interior, by many lines from the North, as well as from the East and West. The two races have passed each other here and there. In other places they have met; and probably nowhere is there more marked evidences of this meeting than in the Ohio valley, where have been found burial places and sepulchral mounds of different kinds and of different times.—Prof. F. W. Putnam, in *The Century*, March, 1890, page 699.

After personal comparison of Peruvian skulls with authentic mound builders' skulls from Michigan and Indiana, and others from dolmens and mounds in Central Tennessee, I feel confident that the identity of the race of the mound builders with

The presence of a few of the long, narrow, or oval skulls in the ancient cemeteries of Ohio, and in the stone graves of Illinois and Tennessee, doubtless marks the beginnings of contact with the northern tribes, and the interminglings and tribal absorptions necessarily preceding the final struggles that resulted in the overthrow and expulsion, or partial expulsion, of the mound builders from their homes in the Ohio valley, and later from the valley of the Cumberland. Other familiar evidences of ethnic identity connecting the mound tribes with the ancient races of Mexico and the South may be traced through the general system of mound and pyramid structures of Mexico and Central America. Nearly all the forms of the tumuli of the Mississippi valley are duplicated in the imposing teocalli. The elevated terraces, the pyramid temples, the truncated cones, the interior tombs, are all to be found among the ruins of the more elaborate pyramids and structures of stone and earth. Ancient mounds and earth-works also extended along the branches of the Red river of the south-west, and through Texas to the very banks of the Rio Grande.

We have already called attention to the fact that some of the upper tributaries of the Arkansas river are to be found in the highlands of New Mexico. From this ancient pueblo district, it flows down into the territory of the mound builders and pottery makers of the lower valley. The ancient culture of Mexico and New Mexico could not have been entirely unknown to the progressive tribes that once peopled the valleys of the Red and Arkansas rivers, and their kindred of the neighboring sections. The presence of obsidian in several mound centers of the East also confirms the other evidences of ancient intercourse.

The illustrations presented in the preceding chapters have called attention to many analogies and identities connecting the antiquities of Tennessee with the ancient arts and industries of Mexico and the pueblos. The remarkable mythological figures upon the

the race of Anahuac and Peru will become fully recognized.—Pre-Adamites (Alexander Winchell), pages 339, 340.

shell gorgets and copper plates surely show unmistakable evidences of a Mexican origin or affiliation. The tube pipes from the valley of the Cumberland, the large ear ornaments, the images, the idols, the grotesque forms, the long ceremonial flints—all seem to connect the mound tribes with the arts, culture, or religion of the peoples of the the west and south-west, and to separate them from the tribes of the north and north-east. The better class of pottery from the graves and mounds, and the ancient ware of the pueblo districts of New Mexico and Arizona, also show decided marks of resemblance. The ancient pottery from the Mississippi valley, as might well be expected, is much inferior to the finer type of the ceramic arts found in Mexico, yet occasional identities in form and character are suggested by the illustrations of the north-eastern ware in the chapter upon ancient pottery. The specimens from the several mound districts greatly vary in form and quality, yet the pottery remains throughout the entire Mississippi valley are homogeneous in their general characteristics.

The remains of ancient arts discovered in the Cumberland and Tennessee valleys, as we have stated, were probably in the main of indigenous growth—the original independent product of the culture of the Stone Grave race, the mound builders of Tennessee. The traces here and there of Mexican, southern, or pueblo culture, save in occasional instances, were probably but the outgrowths of customs and tendencies derived from a common ancestry. The mound building tribes doubtless lived, during many generations, upon various planes of development, in the fertile and widely extended territory in which their monuments are discovered. This progressive race was evidently making steady advances toward a better condition of life. The semi-civilization of the Aztecs was developed, through a series of centuries, from humble beginnings of culture among tribes of aborigines no further advanced than these mound building villagers. The best evidences of this progress among the mound tribes are only occasionally discovered. They come to light at points remote from other discoveries, yet they indicate that their

culture was homogeneous in the several centers of its highest development.

The engraved gorgets of shell from Tennessee, Georgia, Missouri, and Illinois; the incised or engraved copper plates from Georgia and Illinois; the Ohio tablets of stone; the inscribed stones from Middle Tennessee; the copper-plated rings of stone and pottery from the stone graves; the objects plated with meteoric iron from the mounds of Ohio; the finely sculptured stone pipes from the mounds of Ohio, Iowa, and the South; the occasional fine antiques from Alabama, Mississippi, and Arkansas—all are representative types of this advanced culture. Some of the decorated and graceful vessels of pottery, the well-made ornaments and implements, and sets of implements from the stone graves, must also be classed with the other evidences of this more advanced state of society. While we do not regard the magnitude of the large mounds as necessarily constituting reliable testimony as to this higher condition, the remarkable forms of some of the earth-works in the Ohio valley—the circles, squares, and various exact dimensions—seem certain indications of a state of knowledge above the general intelligence of the modern tribes of Indians.

These evidences do not prove the existence of a race necessarily superior to and differing essentially in its characteristics from some of the advanced tribes of modern southern Indians. The antiquities illustrated, considered as a whole, represent a comparatively primitive state of society.

The remains of the arts and industries, in their best manifestations, are typical of the Indian race, but they certainly indicate ethnic conditions, in certain centers of development, considerably above the culture status of even the most advanced tribes of the Mississippi valley at the period of its first settlement by Europeans. The ancestors of some of the historic tribes of eastern Indians may have once lived in this more advanced condition of life. They may have constructed the great mounds, and enjoyed the limited culture represented by the best expressions of prehistoric art; but, if this theory be accepted, it seems clear that the race and their arts, by

reason of some great catastrophe, or succession of wars, defeats, and changes, must have declined or degenerated, and become thereby reduced to a somewhat more barbarous state.

We can not believe that these higher types represent nothing more than the ordinary culture of Indian tribes like the Shawnees and Cherokees, as this culture was observed and reported "a hundred years ago." Neither do we agree in opinion with the class of authors and occasional writers who seem disposed to magnify and overestimate the significance of the ancient monuments and remains of art, and to insist that they are the work of a superior race of Toltecs, Aztecs, or Mayas

Neither of these views correctly interprets the ethnic condition of the mound builders.

A more careful analysis and comparison of actual discoveries should remove the confusion in which this subject has long been involved; and a better understanding of the meaning of the elastic and ill-defined word "*Indian*," as we have already suggested, would also greatly aid in systematizing our knowledge of American archæology.

It would be a difficult task to classify the various branches of the North American Indian family. We shall not attempt it. We think it may be safely asserted, however, that it is impossible to separate the race or tribes of mound builders from this general stock. The innumerable tribes of Indians represented several ethnic stages. A single illustration will answer our purpose. The Comanches, the Apaches, the Utes, the Pimas, the Mohaves, the Maricopas, the Navajos, the Moquis, the Zunis, all lived in the same general section—in New Mexico and Arizona, or in territory adjacent. They represented ethnic conditions widely apart; yet these different tribes had many characteristics and affinities in common. We are told that the Navajos, now living in rude huts, before the advent of the Spaniards, built and lived in pueblo structures.

The Comanches are classed with the wildest hunting tribes; the Moquis and Zunis with the most progressive and advanced—

H. H. Bancroft calls them semi-civilized; *yet all are classed in the general ethnic scale as "Indians."*

In the same sense, the mound builders of the Mississippi valley were "Indians;" but in the scale of civilization, their culture must grade with that of the *highest type Indians*, like the Moquis and Zunis and other advanced tribes of the South-west of the village or sedentary class—tribes of the same race that, under different conditions and surroundings, built up the semi-civilization of ancient Mexico and of the pueblo districts.

A careful examination of the specimens illustrated in the preceding pages will, we think, satisfy the unprejudiced inquirer that they are not inferior in grade to the best types of ancient art discovered in the pueblo sections. Indeed, we doubt whether any existing collection of the prehistoric remains of the pueblo Indians will present evidences of a more advanced condition of society than must have existed in the Mississippi valley during the mound building era.

We have already suggested that the absence of the remains of pueblo or south-western architecture in the eastern mound section is readily explained. The large pueblo structures were the outgrowth of a peculiar environment. They were not suited to conditions of life that existed in the alluvial valleys and primal forests of the Mississippi region. Had some of the adobe or grouted pueblos been erected in the humid, changeable climate of Ohio or Tennessee during the prehistoric period, it would scarcely be possible now to identify their remains. Their walls would have long since dissolved into the original clay.

We have already considered the changed conditions that probably succeeded the decline and final overthrow of the power of the mound builders—the period of tribal "reconstruction." Their culture doubtless left its impress upon the social condition of the Indian tribes of the South, who were found to be more advanced in the humble arts of domestic life, and more peaceable than the Indians of the North.

Although a race apparently homogeneous was found in the Mississippi valley at the later period, many evidences of the more advanced state of the mound tribes still remained, and marked differences were found in the ethnic conditions of the various modern tribes.*

Father Membré, who visited the Lower Mississippi country in 1681, informs us that the natives of Arkansas "did not resemble those of the North, who are all sad and severe in their temper; these," he states, "are far better made, honest, liberal, and gay;" † and Father Hennepin also reported that the southern Indians, two centuries ago, were "civil, easie, tractable, and capable of instruction;" but he declares that the northern Indians "were Brutes as fierce and cruel as any wild Beasts." ‡ The natives of the South visited by these discoverers, it seems, still showed some of the characteristics of the village Indians of the West and South-west.

The civilization of Peru had declined from its best estate when the Spaniards first appeared and trampled upon the power of the Incas; the Mayas had lapsed into barbarism, and their imposing structures of stone were in ruins, when discovered; the Aztecs were less civilized than their predecessors, the Toltecs; and the progressive race of mound builders, who once doubtless formed a strong tribal alliance or confederacy in the Mississippi valley and adjacent

* Any estimate of the time that elapsed during these changes is necessarily conjectural. We have the impression, however, based mainly upon the condition of the remains found in the graves, that the tribes of the Stone Grave race were probably in a flourishing condition in the Cumberland valley *four or five centuries ago*. They may have been at the height of their power at an earlier period. We do not think it is necessary to attribute a greater age than eight hundred or a thousand years to any of the monuments or remains discovered in the Ohio or Cumberland valleys. The remains of the Stone Grave race seem to belong to a later period than most of the Ohio mounds and earth-works.

† Narrative of Father Membré; *Discovery of the Mississippi* (Shea), page 169.

‡ *A New Discovery, etc.*, page 157. London, 1698.

sections, had also probably reached the zenith and decline of their power when Columbus set sail upon his voyage of discovery; but unmistakable evidences of their more advanced state have already been found in many ancient centers of their population and progress.

THE END.

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